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PRIESTESS OF THE FLAME
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I call our world Flatland, not because we call it so, but to make its nature clearer to you, my happy readers, who are privileged to live in Space.

Imagine a vast sheet of paper on which straight Lines, Triangles, Squares, Pentagons, Hexagons, and other figures, instead of remaining fixed in their places, move freely about, on or in the surface, but without the power of rising above or sinking below it, very much like shadows—only hard with luminous edges—and you will then have a pretty correct notion of my country and countrymen. Alas, a few years ago, I should have said "my universe:" but now my mind has been opened to higher views of things.

In such a country, you will perceive at once that it is impossible that there should be anything of what you call a "solid" kind; but I dare say you will suppose that we could at least distinguish by sight the Triangles, Squares, and other figures, moving about as I have described them. On the contrary, we could see nothing of the kind, not at least so as to distinguish one figure from another. Nothing was visible, nor could be visible, to us, except Straight Lines; and the necessity of this I will speedily demonstrate.

Place a penny on the middle of one of your tables in Space; and leaning over it, look down upon it. It will appear a circle.

But now, drawing back to the edge of the table, gradually lower your eye (thus bringing yourself more and more into the condition of the inhabitants of Flatland), and you will find the penny becoming more and more oval to your view, and at last when you have placed your eye exactly on the edge of the table (so that you are, as it were, actually a Flatlander) the penny will then have ceased to appear oval at all, and will have become, so far as you can see, a straight line.

The same thing would happen if you were to treat in the same way a Triangle, or a Square, or any other figure cut out from pasteboard. As soon as you look at it with your eye on the edge of the table, you will find that it ceases to appear to you as a figure, and that it becomes in appearance a straight line. Take for example an equilateral Triangle—who represents with us a Tradesman of the respectable class. Figure 1 represents the Tradesman as you would see him while you were bending over him from above; figures 2 and 3 represent the Tradesman, as you would see him if your eye were close to the level, or all but on the level of the table; and if your eye were quite on the level of the table (and that is how we see him in Flatland) you would see nothing but a straight line.

When I was in Spaceland I heard that your sailors have very similar experiences while they traverse your seas and discern some distant island or coast lying on the horizon. The far-off land may have bays, forelands, angles in and out to any number and extent; yet at a distance you see none of these (unless indeed your sun shines bright upon them revealing the projections and retirements by means of light and shade), nothing but a grey unbroken line upon the water.

Well, that is just what we see when one of our triangular or other acquaintances comes towards us in Flatland. As there is neither sun with us, nor any light of such a kind as to make shadows, we have none of the helps to the sight that you have in Spaceland. If our friend comes closer to us we see his line becomes larger; if he leaves us it becomes smaller; but still he looks like a straight line; be he a Triangle, Square, Pentagon, Hexagon, Circle, what you will—a straight Line he looks and nothing else.

You may perhaps ask how under these disadvantagous circumstances we are able to distinguish our friends from one another: but the answer to this very natural question will be more fitly and easily given when I come to describe the inhabitants of Flatland. For the present let me defer this subject, and say a word or two about the climate and houses in our country.
As with you, so also with us, there are four points of the compass—North, South, East, and West.

There being no sun nor other heavenly bodies, it is impossible for us to determine the North in the usual way; but we have a method of our own. By a Law of Nature with us, there is a constant attraction to the South; and, although in temperate climates this is very slight—so that even a Woman in reasonable health can journey several furlongs northward without much difficulty—yet the hampering effort of the southward attraction is quite sufficient to serve as a compass in most parts of our earth. Moreover, the rain (which falls at stated intervals) coming always from the North, is an additional assistance; and in the towns we have the guidance of the houses, which of course have their side-walls running for the most part North and South, so that the roofs may keep off the rain from the North. In the country, where there are no houses, the trunks of the trees serve as some sort of guide. Altogether, we have not so much difficulty as might be expected in determining our bearings.

Yet in our more temperate regions, in which the southward attraction is hardly felt, walking sometimes in a perfectly desolate plain where there have been no houses nor trees to guide me, I have been occasionally compelled to remain stationary for hours together, waiting till the rain came before continuing my journey. On the weak and aged, and especially on delicate Females, the force of attraction tells much more heavily than on the robust of the Male Sex, so that it is a point of breeding, if you meet a Lady on the street, always to give her the North side of the way—by no means an easy thing to do always at short notice when you are in rude health and in a climate where it is difficult to tell your North from your South.

Windows there are none in our houses: for the light comes to us alike in our homes and out of them, by day and by night, equally at all times and in all places, whence we know not. It was in old days, with our learned men, an interesting and oft-investigate question, “What is the origin of light?” and the solution of it has been repeatedly attempted, with no other result than to crowd our lunatic asylums with the would-be solvers. Hence, after fruitless attempts to suppress such investigations indirectly by making them liable to a heavy tax, the Legislature, in comparatively recent times, absolutely prohibited them. I—alas, I alone in Flatland—know now only too well the true solution of this mysterious problem; but my knowledge cannot be made intelligible to a single one of my countrymen; and I am mocked at—I, the sole possessor of the truths of Space and of the theory of the introduction of Light from the world of three Dimensions—as if I were the maddest of the mad! But a truce to these painful digressions: let me return to our homes.

The most common form for the construction of a house is five-sided or pentagonal, as in the annexed figure. The two Northern sides RO, OF, constitute the roof, and for the most part have no doors; on the East is a small door for the Women; on the West a much larger one for the Men; the South side or floor is usually doorless.

Square and triangular houses are not allowed, and for this reason. The angles of a Square (and still more those of an equilateral Triangle,) being much more pointed than those of a Pentagon, and the lines of inanimate objects (such as houses) being dimmer than the lines of Men and Women, it follows that there is no little danger lest the points of a square of triangular house residence might do serious injury to an inconsiderate or perhaps absentminded traveller suddenly running against them: and therefore, as early as the eleventh century of our era, triangular houses were universally forbidden by Law, the only exceptions being fortifications, powder-magazines, barracks, and other state buildings, which is not desirable that the general public should approach without circumspection.

At this period, square houses were still everywhere permitted, though discouraged by a special tax. But, about three centuries afterwards, the Law decided that in all towns containing a population above ten thousand, the angle of a Pentagon was the smallest house-angle that could be allowed consistently with the public safety. The good sense of the community has seconded the efforts of the Legislature; and now, even in the country, the pentagonal construction has superseded every other. It is only now and then in some very remote and backward agricultural district that an antiquarian may still discover a square house.

SECTION 3 Concerning the Inhabitants of Flatland

The greatest length or breadth of a full grown inhabitant of Flatland may be estimated at about eleven of your inches. Twelve inches may be regarded as a maximum.

Our Women are Straight Lines.

Our Soldiers and Lowest Class of Workmen are Triangles with two equal sides, each about eleven inches long, and a base or third side so short (often not exceeding half an inch) that they form at their vertices a very sharp and formidable angle. Indeed when their bases are of the most degraded type (not more than the eighth part of an inch in size), they can hardly be distinguished from Straight lines or Women; so extremely pointed are their vertices. With us, as with you, these Triangles are distinguished from others by being called Isosceles; and by this name I shall refer to them in the following pages.

Our Middle Class consists of Equilateral or Equal-Sided Triangles.

Our Professional Men and Gentlemen are Squares (to which class I myself belong) and Five-Sided Figures or
Pentagons.

Next above these come the Nobility, of whom there are several degrees, beginning at Six-Sided Figures, or Hexagons, and from thence rising in the number of their sides till they receive the honourable title of Polygonal, or many-Sided. Finally when the number of the sides becomes so numerous, and the sides themselves so small, that the figure cannot be distinguished from a circle, he is included in the Circular or Priestly order; and this is the highest class of all.

It is a Law of Nature with us that a male child shall have one more side than his father, so that each generation shall rise (as a rule) one step in the scale of development and nobility. Thus the son of a Square is a Pentagon; the son of a Pentagon, a Hexagon; and so on.

But this rule applies not always to the Tradesman, and still less often to the Soldiers, and to the Workmen; who indeed can hardly be said to deserve the name of human Figures, since they have not all their sides equal. With them therefore the Law of Nature does not hold; and the son of an Isosceles (i.e. a Triangle with two sides equal) remains Isosceles still. Nevertheless, all hope is not such out, even from the Isosceles, that his posterity may ultimately rise above his degraded condition. For, after a long series of military successes, or diligent and skillful labours, it is generally found that the more intelligent among the Artisan and Soldier classes manifest a slight increase of their third side or base, and a shrinkage of the two other sides. Intermarriages (arranged by the Priests) between the sons and daughters of these more intellectual members of the lower classes generally result in an offspring approximating still more to the type of the Equal-Sided Triangle.

Rarely—in proportion to the vast numbers of Isosceles births—is a genuine and certifiable Equal-Sided Triangle produced from Isosceles parents (footnote 1). Such a birth requires, as its antecedents, not only a series of carefully arranged intermarriages, but also a long-continued exercise of frugality and self-control on the part of the would-be ancestors of the coming Equilateral, and a patient, systematic, and continuous development of the Isosceles intellect through many generations.

The birth of a True Equilateral Triangle from Isosceles parents is the subject of rejoicing in our country for many furlongs round. After a strict examination conducted by the Sanitary and Social Board, the infant, if certified as Regular, is with solemn ceremonial admitted into the class of Equilaterals. He is then immediately taken from his proud yet sorrowing parents and adopted by some childless Equilateral, who is bound by oath never to permit the child henceforth to enter his former home or so much as to look upon his relations again, for fear lest the freshly developed organism may, by force of unconscious imitation, fall back again into his hereditary level.

The occasional emergence of an Equilateral from the ranks of his serf-born ancestors is welcomed, not only by the poor serfs themselves, as a gleam of light and hope shed upon the monotonous squalor of their existence, but also by the Aristocracy at large; for all the higher classes are well aware that these rare phenomena, while they do little or nothing to vulgarize their own privileges, serve as almost useful barrier against revolution from below.

Had the acute-angled rabble been all, without exception, absolutely destitute of hope and of ambition, they might have found leaders in some of their many seditious outbreaks, so able as to render their superior numbers and strength too much even for the wisdom of the Circles. But a wise ordinance of Nature has decreed that in proportion as the working-classes increase in intelligence, knowledge, and all virtue, in that same proportion their acute angle (which makes them physically terrible) shall increase also and approximate to their comparatively harmless angle of the Equilateral Triangle. Thus, in the most brutal and formidable off the soldier class—creatures almost on a level with women in their lack of intelligence—it is found that, as they wax in the mental ability necessary to employ their tremendous penetrating power to advantage, so do they wane in the power of penetration itself.

How admirable is the Law of Compensation! And how perfect a proof of the natural fitness and, I may almost say, the divine origin of the aristocratic constitution of the States of Flatland! By a judicious use of this Law of Nature, the Polygons and Circles are almost always able to stifle sedition in its very cradle, taking advantage of the irrepressible and boundless hopefulness of the human mind. Art also comes to the aid of Law and Order. It is generally found possible—by a little artificial compression or expansion on the part of the State physicians—to make some of the more intelligent leaders of a rebellion perfectly Regular, and to admit them at once into the privileged classes; a much larger number, who are still below the standard, allured by the prospect of being ultimately ennobled, are induced to enter the State Hospitals, where they are kept in honourable confinement for life; one or two alone of the most obstinate, foolish, and hopelessly irregular are led to execution.

Then the wretched rabble of the Isosceles, planless and leaderless, are either transfixed without resistance by the small body of their brethren whom the Chief Circle keeps in pay for emergencies of this kind; or else more often, by means of jealousies and suspicious skilfully fomented among them by the Circular party, they are stirred to mutual warfare, and perish by one another's angles. No less than one hundred and twenty rebellions are recorded in our annals, besides minor outbreaks numbered at two hundred and thirty-five; and they have all ended thus.

Footnote 1. "What need of a certificate?" a Spaceland critic may ask: "Is not the procreation of a Square Son a
beyond a mere monotonous swing, like the ticking of a pendulum; and the regular tick of the Equilateral is no less
than the regular beat of a heart, or the respiration of our lungs. Our female is a being of a more complex and
perilous nature than that of our male. If a Man is a wedge, a Woman is a needle; being, so to speak, ALL point, at least
at the two extremities. Add to this the power of making herself practically invisible at will, and you will perceive
that a Female, in Flatland, is a creature by no means to be trifled with.

But here, perhaps, some of my younger Readers may ask HOW a woman in Flatland can make herself
invisible. This ought, I think, to be apparent without any explanation. However, a few words will make it clear to the
most unreflecting.

Place a needle on the table. Then, with your eye on the level of the table, look at it side-ways, and you see the
whole length of it; but look at it end-ways, and you see nothing but a point, it has become practically invisible. Just
so is it with one of our Women. When her side is turned towards us, we see her as a straight line; when the end
containing her eye or mouth—for with us these two organs are identical—is the part that meets our eye, then we see
nothing but a highly lustrous point; but when the back is presented to our view, then—being only sub-lustrous, and, and
indeed, almost as dim as an inanimate object—her hinder extremity serves her as a kind of Invisible Cap.

The dangers to which we are exposed from our Women must now be manifest to the meanest capacity of
Spaceland. If even the angle of a respectable Triangle in the middle class is not without its dangers; if to run against
a Working Man involves a gash; if collision with an Officer of the military class necessitates a serious wound; if a
mere touch from the vertex of a Private Soldier brings with it danger of death;—what can it be to run against a
woman, except absolute and immediate destruction? And when a Woman is invisible, or visible only as a dim sub-
lustrous point, how difficult must it be, even for the most cautious, always to avoid collision!

Many are the enactments made at different times in the different States of Flatland, in order to minimize this
peril; and in the Southern and less temperate climates, where the force of gravitation is greater, and human beings
more liable to casual and involuntary motions, the Laws concerning Women are naturally much more stringent. But
a general view of the Code may be obtained from the following summary:—

1. Every house shall have one entrance on the Eastern side, for the use of Females only; by which all females
shall enter "in a becoming and respectful manner" (footnote 1) and not by the Men's or Western door.
2. No Female shall walk in any public place without continually keeping up her Peace-cry, under penalty of
death.
3. Any Female, duly certified to be suffering from St. Vitus's Dance, fits, chronic cold accompanied by violent
sneezing, or any disease necessitating involuntary motions, shall be instantly destroyed.

In some of the States there is an additional Law forbidding Females, under penalty of death, from walking or
standing in any public place without moving their backs constantly from right to left so as to indicate their presence
to those behind them; other oblige a Woman, when travelling, to be followed by one of her sons, or servants, or by
her husband; others confine Women altogether in their houses except during the religious festivals. But it has been
found by the wisest of our Circles or Statesmen that the multiplication of restrictions on Females tends not only to
the debilitation and diminution of the race, but also to the increase of domestic murders to such an extent that a State
loses more than it gains by a too prohibitive Code.

For whenever the temper of the Women is thus exasperated by confinement at home or hampering regulations
abroad, they are apt to vent their spleen upon their husbands and children; and in the less temperate climates the
whole male population of a village has been sometimes destroyed in one or two hours of a simultaneous female
outbreak. Hence the Three Laws, mentioned above, suffice for the better regulated States, and may be accepted as a
rough exemplification of our Female Code.

After all, our principal safeguard is found, not in Legislature, but in the interests of the Women themselves.
For, although they can inflict instantaneous death by a retrograde movement, yet unless they can at once disengage
their stingy extremity from the struggling body of their victim, their own frail bodies are liable to be shattered.

The power of Fashion is also on our side. I pointed out that in some less civilized States no female is suffered to
stand in any public place without sining her back from right to left. This practice has been universal among ladies
of any pretensions to breeding in all well-governed States, as far back as the memory of Figures can reach. It is
considered a disgrace to any state that legislation should have to enforce what ought to be, and is in every
respectable female, a natural instinct. The rhythmical and, if I may so say, well-modulated undulation of the back in
our ladies of Circular rank is envied and imitated by the wife of a common Equilateral, who can achieve nothing
beyond a mere monotonous swing, like the ticking of a pendulum; and the regular tick of the Equilateral is no less
admired and copied by the wife of the progressive and aspiring Isosceles, in the females of whose family no "back-motion" of any kind has become as yet a necessity of life. Hence, in every family of position and consideration, "back motion" is as prevalent as time itself; and the husbands and sons in these households enjoy immunity at least from invisible attacks.

Not that it must be for a moment supposed that our Women are destitute of affection. But unfortunately the passion of the moment predominates, in the Frail Sex, over every other consideration. This is, of course, a necessity arising from their unfortunate conformation. For as they have no pretensions to an angle, being inferior in this respect to the very lowest of the Isosceles, they are consequently wholly devoid of brainpower, and have neither reflection, judgment nor forethought, and hardly any memory. Hence, in their fits of fury, they remember no claims and recognize no distinctions. I have actually known a case where a Woman has exterminated her whole household, and half an hour afterwards, when her rage was over and the fragments swept away, has asked what has become of her husband and children.

Obviously then a Woman is not to be irritated as long as she is in a position where she can turn round. When you have them in their apartments—which are constructed with a view to denying them that power—you can say and do what you like; for they are then wholly impotent for mischief, and will not remember a few minutes hence the incident for which they may be at this moment threatening you with death, nor the promises which you may have found it necessary to make in order to pacify their fury.

On the whole we got on pretty smoothly in our domestic relations, except in the lower strata of the Military Classes. There the want of tact and discretion on the part of the husbands produces at times indescribable disasters. Relying too much on the offensive weapons of their acute angles instead of the defensive organs of good sense and seasonable simulations, these reckless creatures too often neglect the prescribed construction of the women's apartments, or irritate their wives by ill-advised expressions out of doors, which they refuse immediately to retract. Moreover a blunt and stolid regard for literal truth indisposes them to make those lavish promises by which the more judicious Circle can in a moment pacify his consort. The result is massacre; not, however, without its advantages, as it eliminates the more brutal and troublesome of the Isosceles; and by many of our Circles the destructiveness of the Thinner Sex is regarded as one among many providential arrangements for suppressing redundant population, and nipping Revolution in the bud.

Yet even in our best regulated and most approximately Circular families I cannot say that the ideal of family life is so high as with you in Spaceland. There is peace, in so far as the absence of slaughter may be called by that name, but there is necessarily little harmony of tastes or pursuits; and the cautious wisdom of the Circles has ensured safety at the cost of domestic comfort. In every Circular or Polygonal household it has been a habit from time immemorial—and now has become a kind of instinct among the women of our higher classes—that the mothers and daughters should constantly keep their eyes and mouths towards their husband and his male friends; and for a lady in a family of distinction to turn her back upon her husband would be regarded as a kind of portent, involving loss of STATUS. But, as I shall soon shew, this custom, though it has the advantage of safety, is not without disadvantages.

In the house of the Working Man or respectable Tradesman—where the wife is allowed to turn her back upon her husband, while pursuing her household avocations—there are at least intervals of quiet, when the wife is neither seen nor heard, except for the humming sound of the continuous Peace-cry; but in the homes of the upper classes there is too often no peace. There the voluble mouth and bright penetrating eye are ever directed toward the Master of the household; and light itself is not more persistent than the stream of Feminine discourse. The tact and skill which suffice to avert a Woman's sting are unequal to the task of stopping a Woman's mouth; and as the wife has absolutely nothing to say, and absolutely no constraint of wit, sense, or conscience to prevent her from saying it, not a few cynics have been found to aver that they prefer the danger of the death-dealing but inaudible sting to the safe sonorosity of a Woman's other end.

To my readers in Spaceland the condition of our Women may seen truly deplorable, and so indeed it is. A Male of the lowest type of the Isosceles may look forward to some improvement of his angle, and to the ultimate elevation of the whole of his degraded caste; but no Woman can entertain such hopes for her sex. "Once a Woman, always a Woman" is a Decree of Nature; and the very Laws of Evolution seem suspended in her disfavour. Yet at least we can admire the wise Prearrangement which has ordained that, as they have no hopes, so they shall have no memory to recall, and no forethought to anticipate, the miseries and humiliations which are at once a necessity of their existence and the basis of the constitution of Flatland.

SECTION 5 Of our Methods of Recognizing one another

You, who are blessed with shade as well as light, you, who are gifted with two eyes, endowed with a knowledge of perspective, and charmed with the enjoyment of various colours, you, who can actually SEE an angle, and contemplate the complete circumference of a Circle in the happy region of the Three Dimensions—how shall I make it clear to you the extreme difficulty which we in Flatland experience in recognizing one another's
and not till the lapse of five generations was the lost ground recovered, the full 60 degrees attained, and the Ascent towards better things. The result was that in the next generation the family brain was registered at only 58 degrees, and thereby, partly in consequence of his long imprisonment and degradation, and partly because of the moral shock the act of being felt by a Polygon, by one sudden start accidentally transfixed the Great Man through the diagonal degrees 30 minutes. According to his account, my unfortunately Ancestor, being afflicted with rheumatism, and in which had occurred to his great-great-great-Grandfather, a respectable Working Man with an angle or brain of 59 him into the class of the Equal-sided—often deplored, with a tear in his venerable eye, a miscarriage of this kind, indeed obtained, shortly before his decease, four out of seven votes from the Sanitary and Social Board for passing has ere now deprived the State of a valuable life!

sensitive to the delicate touch of the highly organized Polygon. What wonder then if an involuntary toss of the head cognizance of what goes on at that extremity of their frame. They are, moreover, of a rough coarse nature, not lower classes of the Triangles. With them, the eye is situated so far from their vertex that they can scarcely take to prove fatal to the incautious, and to nip in the bud many a promising friendship. Especially is this true among the stand perfectly still. A start, a fidgety shifting of the position, yes, even a violent sneeze, has been known before now might inflict on the unwary Feeling irreparable injury. It is essential for the safety of the Feeler that the Felt should readily perceive that the process of introduction by contact requires some care and discretion. Otherwise the angles to discriminate between different classes, at least so far as concerns the three lowest orders, the Equilateral, the Square, and the Pentagon—for the Isosceles I take no account. But as we ascend the social scale, the process of discriminating and being discriminated by hearing increases in difficulty, partly because voices are assimilated, partly because the faculty of voice-discrimination is a plebeian virtue not much developed among the Aristocracy. And wherever there is any danger of imposture we cannot trust to this method. Amongst our lowest orders, the vocal organs are developed to a degree more than correspondent with those of hearing, so that an Isosceles can easily feign the voice of a Polygon, and, with some training, that of a Circle himself. A second method is therefore more commonly resorted to.

FEELING is, among our Women and lower classes—about our upper classes I shall speak presently—the principal test of recognition, at all events between strangers, and when the question is, not as to the individual, but as to the class. What therefore "introduction" is among the higher classes in Spaceland, that the process of "feeling" is with us. "Permit me to ask you to feel and be felt by my friend Mr. So-and-so"—is still, among the more old-fashioned of our country gentlemen in districts remote from towns, the customary formula for a Flatland introduction. But in the towns, and among men of business, the words "be felt by" are omitted and the sentence is abbreviated to, "Let me ask you to feel Mr. So-and-so"; although it is assumed, of course, that the "feeling" is to be reciprocal. Among our still more modern and dashing young gentlemen—who are extremely averse to superfluous effort and supremely indifferent to the purity of their native language—the formula is still further curtailed by the use of "to feel" in a technical sense, meaning, "to recommend-for-the-purposes-of-feeling-and-being-felt"; and at this moment the "slang" of polite or fast society in the upper classes sanctions such a barbarism as "Mr. Smith, permit me to feel Mr. Jones."

Let not my Reader however suppose that "feeling" is with us the tedious process that it would be with you, or that we find it necessary to feel right round all the sides of every individual before we determine the class to which he belongs. Long practice and training, begun in the schools and continued in the experience of daily life, enable us to discriminate at once by the sense of touch, between the angles of an equal-sided Triangle, Square, and Pentagon; and I need not say that the brainless vertex of an acute-angled Isosceles is obvious to the dullest touch. It is therefore not necessary, as a rule, to do more than feel a single angle of an individual; and this, once ascertained, tells us the class of the person whom we are addressing, unless indeed he belongs to the higher sections of the nobility. There the difficulty is much greater. Even a Master of Arts in our University of Wembidge has been known to confuse a ten-sided with a twelve-sided Polygon; and there is hardly a Doctor of Science in or out of that famous University who could pretend to decide promptly and unhesitatingly between a twenty-sided and a twenty-four sided member of the Aristocracy.

Those of my readers who recall the extracts I gave above from the Legislative code concerning Women, will readily perceive that the process of introduction by contact requires some care and discretion. Otherwise the angles might inflict on the unwary Feeling irreparable injury. It is essential for the safety of the Feeler that the Felt should stand perfectly still. A start, a fidgety shifting of the position, yes, even a violent sneeze, has been known before now to prove fatal to the incautious, and to nip in the bud many a promising friendship. Especially is this true among the lower classes of the Triangles. With them, the eye is situated so far from their vertex that they can scarcely take cognizance of what goes on at that extremity of their frame. They are, moreover, of a rough coarse nature, not sensitive to the delicate touch of the highly organized Polygon. What wonder then if an involuntary toss of the head has ere now deprived the State of a valuable life!

I have heard that my excellent Grandfather—one of the least irregular of his unhappy Isosceles class, who indeed obtained, shortly before his decease, four out of seven votes from the Sanitary and Social Board for passing him into the class of the Equal-sided—often deplored, with a tear in his venerable eye, a miscarriage of this kind, which had occurred to his great-great-great-Grandfather, a respectable Working Man with an angle or brain of 59 degrees 30 minutes. According to his account, my unfortunately Ancestor, being afflicted with rheumatism, and in the act of being felt by a Polygon, by one sudden start accidentally transfixed the Great Man through the diagonal and thereby, partly in consequence of his long imprisonment and degradation, and partly because of the moral shock which pervaded the whole of my Ancestor's relations, threw back our family a degree and a half in their ascent towards better things. The result was that in the next generation the family brain was registered at only 58 degrees, and not till the lapse of five generations was the lost ground recovered, the full 60 degrees attained, and the Ascent
from the Isosceles finally achieved. And all this series of calamities from one little accident in the process of Feeling.

As this point I think I hear some of my better educated readers exclaim, "How could you in Flatland know anything about angles and degrees, or minutes? We SEE an angle, because we, in the region of Space, can see two straight lines inclined to one another; but you, who can see nothing but on straight line at a time, or at all events only a number of bits of straight lines all in one straight line,—how can you ever discern an angle, and much less register angles of different sizes?"

I answer that though we cannot SEE angles, we can INFER them, and this with great precision. Our sense of touch, stimulated by necessity, and developed by long training, enables us to distinguish angles far more accurately than your sense of sight, when unaided by a rule or measure of angles. Nor must I omit to explain that we have great natural helps. It is with us a Law of Nature that the brain of the Isosceles class shall begin at half a degree, or thirty minutes, and shall increase (if it increases at all) by half a degree in every generation until the goal of 60 degrees is reached, when the condition of serfdom is quitted, and the freeman enters the class of Regulars.

Consequently, Nature herself supplies us with an ascending scale or Alphabet of angles for half a degree up to 60 degrees, Specimen of which are placed in every Elementary School throughout the land. Owing to occasional retrogressions, to still more frequent moral and intellectual stagnation, and to the extraordinary fecundity of the Criminal and Vagabond classes, there is always a vast superfluity of individuals of the half degree and single degree class, and a fair abundance of Specimens up to 10 degrees. These are absolutely destitute of civil rights; and a great number of them, not having even intelligence enough for the purposes of warfare, are devoted by the States to the service of education. Fettered immovably so as to remove all possibility of danger, they are placed in the classrooms of our Infant Schools, and there they are utilized by the Board of Education for the purpose of imparting to the offspring of the Middle Classes the tact and intelligence which these wretched creatures themselves are utterly devoid.

In some States the Specimens are occasionally fed and suffered to exist for several years; but in the more temperate and better regulated regions, it is found in the long run more advantageous for the educational interests of the young, to dispense with food, and to renew the Specimens every month—which is about the average duration of the foodless existence of the Criminal class. In the cheaper schools, what is gained by the longer existence of the Specimen is lost, partly in the expenditure for food, and partly in the diminished accuracy of the angles, which are impaired after a few weeks of constant "feeling." Nor must we forget to add, in enumerating the advantages of the more expensive system, that it tends, though slightly yet perceptibly, to the diminution of the redundant Isosceles population—an object which every statesman in Flatland constantly keeps in view. On the whole therefore—although I am not ignorant that, in many popularly elected School Boards, there is a reaction in favour of "the cheap system" as it is called—I am myself disposed to think that this is one of the many cases in which expense is the truest economy.

But I must not allow questions of School Board politics to divert me from my subject. Enough has been said, I trust, to shew that Recognition by Feeling is not so tedious or indecisive a process as might have been supposed; and it is obviously more trustworthy than Recognition by hearing. Still there remains, as has been pointed out above, the objection that this method is not without danger. For this reason many in the Middle and Lower classes, and all without exception in the Polygonal and Circular orders, prefer a third method, the description of which shall be reserved for the next section.

SECTION 6 Of Recognition by Sight

I am about to appear very inconsistent. In the previous sections I have said that all figures in Flatland present the appearance of a straight line; and it was added or implied, that it is consequently impossible to distinguish by the visual organ between individuals of different classes; yet now I am about to explain to my Spaceland critics how we are able to recognize one another by the sense of sight.

If however the Reader will take the trouble to refer to the passage in which Recognition by Feeling is stated to be universal, he will find this qualification—"among the lower classes." It is only among the higher classes and in our more temperate climates that Sight Recognition is practised.

That this power exists in any regions and for any classes is the result of Fog; which prevails during the greater part of the year in all parts save the torrid zones. That which is with you in Spaceland an unmixed evil, blotting out the landscape, depressing the spirits, and enfeebling the health, is by us recognized as a blessing scarcely inferior to air itself, and as the Nurse of arts and Parent of sciences. But let me explain my meaning, without further eulogies on this beneficent Element.

If Fog were non-existent, all lines would appear equally and indistinguishably clear; and this is actually the case in those unhappy countries in which the atmosphere is perfectly dry and transparent. But wherever there is a rich supply of Fog, objects that are at a distance, say of three feet, are appreciably dimmer than those at the distance
of two feet eleven inches; and the result is that by careful and constant experimental observation of comparative
dimness and clearness, we are enabled to infer with great exactness the configuration of the object observed.

An instance will do more than a volume of generalities to make my meaning clear.

Suppose I see two individuals approaching whose rank I wish to ascertain. They are, we will suppose, a
Merchant and a Physician, or in other words, an Equilateral Triangle and a Pentagon; how am I to distinguish them?

It will be obvious, to every child in Spaceland who has touched the threshold of Geometrical Studies, that, if I
can bring my eye so that its glance may bisect an angle (A) of the approaching stranger, my view will lie as it were
evenly between the two sides that are next to me (viz. CA and AB), so that I shall contemplate the two impartially,
and both will appear of the same size.

Now in the case of (1) the Merchant, what shall I see? I shall see a straight line DAE, in which the middle point
(A) will be very bright because it is nearest to me; but on either side the line will shade away RAPIDLY TO
DIMNESS, because the sides AC and AB RECEDE RAPIDLY INTO THE FOG and what appear to me as the
Merchant's extremities, viz. D and E, will be VERY DIM INDEED.

On the other hand in the case of (2) the Physician, though I shall here also see a line (D'A'E') with a bright
centre (A'), yet it will shade away LESS RAPIDLY to dimness, because the sides (A'C', A'B') RECEDE LESS
RAPIDLY INTO THE FOG: and what appear to me the Physician's extremities, viz. D' and E', will not be NOT SO
DIM as the extremities of the Merchant.

The Reader will probably understand from these two instances how—after a very long training supplemented
by constant experience—it is possible for the well-educated classes among us to discriminate with fair accuracy
between the middle and lowest orders, by the sense of sight. If my Spaceland Patrons have grasped this general
conception, so far as to conceive the possibility of it and not to reject my account as altogether incredible—I can
have attained all I can reasonably expect. Were I to attempt further details I should only perplex. Yet for the sake
of the young and inexperienced, who may perchance infer—from the two simple instances I have given above, of
the manner in which I should recognize my Father and my Sons—that Recognition by sight is an easy affair, it may be
needful to point out that in actual life most of the problems of Sight Recognition are far more subtle and complex.

If for example, when my Father, the Triangle, approaches me, he happens to present his side to me instead of
his angle, then, until I have asked him to rotate, or until I have edged my eye around him, I am for the moment
doubtful whether he may not be a Straight Line, or, in other words, a Woman. Again, when I am in the company
of one of my two hexagonal Grandsons, contemplating one of his sides (AB) full front, it will be evident from the
accompanying diagram that I shall see one whole line (AB) in comparative brightness (shading off hardly at all at
the ends) and two smaller lines (CA and BD) dim throughout and shading away into greater dimness towards the
extremities C and D.

But I must not give way to the temptation of enlarging on these topics. The meanest mathematician in
Spaceland will readily believe me when I assert that the problems of life, which present themselves to the well-
educated—when they are themselves in motion, rotating, advancing or retreating, and at the same time attempting to
discriminate by the sense of sight between a number of Polygons of high rank moving in different directions, as for
example in a ball-room or conversazione—must be of a nature to task the angularity of the most intellectual, and
amply justify the rich endowments of the Learned Professors of Geometry, both Static and Kinetic, in the illustrious
University of Wentbridge, where the Science and Art of Sight Recognition are regularly taught to large classes of
the ELITE of the States.

It is only a few of the scions of our noblest and wealthiest houses, who are able to give the time and money
necessary for the thorough prosecution of this noble and valuable Art. Even to me, a Mathematician of no mean
standing, and the Grandfather of two most hopeful and perfectly regular Hexagons, to find myself in the midst of a
crowd of rotating Polygons of the higher classes, is occasionally very perplexing. And of course to a common
Trading, or Serf, such a sight is almost as unintelligible as it would be to you, my Reader, were you suddenly
transported to my country.

In such a crowd you could see on all sides of you nothing but a Line, apparently straight, but of which the parts
would vary irregularly and perpetually in brightness or dimness. Even if you had completed your third year in the
Pentagonal and Hexagonal classes in the University, and were perfect in the theory of the subject, you would still
find there was need of many years of experience, before you could move in a fashionable crowd without jostling
against your betters, whom it is against etiquette to ask to "feel," and who, by their superior culture and breeding,
know all about your movements, while you know very little or nothing about theirs. In a word, to comport oneself
with perfect propriety in Polygonal society, one ought to be a Polygon oneself. Such at least is the painful teaching
of my experience.

It is astonishing how much the Art—or I may almost call it instinct—of Sight Recognition is developed by the
habitual practice of it and by the avoidance of the custom of "Feeling." Just as, with you, the deaf and dumb, if once
allowed to gesticulate and to use the hand-alphabet, will never acquire the more difficult but far more valuable art of lip-speech and lip-reading, so it is with us as regards "Seeing" and "Feeling." None who in early life resort to "Feeling" will ever learn "Seeing" in perfection.

For this reason, among our Higher Classes, "Feeling" is discouraged or absolutely forbidden. From the cradle their children, instead of going to the Public Elementary schools (where the art of Feeling is taught,) are sent to higher Seminaries of an exclusive character; and at our illustrious University, to "feel" is regarded as a most serious fault, involving Rustication for the first offence, and Expulsion for the second.

But among the lower classes the art of Sight Recognition is regarded as an unattainable luxury. A common Tradesman cannot afford to let his son spend a third of his life in abstract studies. The children of the poor are therefore allowed to "feel" from their earliest years, and they gain thereby a precocity and an early vivacity which contrast at first most favourably with the inert, undeveloped, and listless behaviour of the half-instructed youths of the Polygonal class; but when the latter have at last completed their University course, and are prepared to put their theory into practice, the change that comes over them may almost be described as a new birth, and in every art, science, and social pursuit they rapidly overtake and distance their Triangular competitors.

Only a few of the Polygonal Class fail to pass the Final Test or Leaving Examination at the University. The condition of the unsuccessful minority is truly pitiable. Rejected from the higher class, they are also despised by the lower. They have neither the matured and systematically trained powers of the Polygonal Bachelors and Masters of Arts, nor yet the native precocity and mercurial versatility of the youthful Tradesman. The professions, the public services, are closed against them, and though in most States they are not actually debarred from marriage, yet they have the greatest difficulty in forming suitable alliances, as experience shews that the offspring of such unfortunate and ill-endowed parents is generally itself unfortunate, if not positively Irregular.

It is from these specimens of the refuse of our Nobility that the great Tumults and Seditions of past ages have generally derived their leaders; and so great is the mischief thence arising that an increasing minority of our more progressive Statesmen are of opinion that true mercy would dictate their entire suppression, by enacting that all who fail to pass the Final Examination of the University should be either imprisoned for life, or extinguished by a painless death.

But I find myself digressing into the subject of Irregularities, a matter of such vital interest that it demands a separate section.

SECTION 7 Concerning Irregular Figures

Throughout the previous pages I have been assuming—what perhaps should have been laid down at the beginning as a distinct and fundamental proposition—that every human being in Flatland is a Regular Figure, that is to say of regular construction. By this I mean that a Woman must not only be a line, but a straight line; that an Artisan or Soldier must have two of his sides equal; that Tradesmen must have three sides equal; Lawyers (of which class I am a humble member), four sides equal, and, generally, that in every Polygon, all the sides must be equal.

The sizes of the sides would of course depend upon the age of the individual. A Female at birth would be about an inch long, while a tall adult Woman might extend to a foot. As to the Males of every class, it may be roughly said that the length of an adult's size, when added together, is two feet or a little more. But the size of our sides is not under consideration. I am speaking of the EQUALITY of sides, and it does not need much reflection to see that the whole of the social life in Flatland rests upon the fundamental fact that Nature wills all Figures to have their sides equal.

If our sides were unequal our angles might be unequal. Instead of its being sufficient to feel, or estimate by sight, a single angle in order to determine the form of an individual, it would be necessary to ascertain each angle by the experiment of Feeling. But life would be too short for such a tedious groping. The whole science and art of Sight Recognition would at once perish; Feeling, so far as it is an art, would not long survive; intercourse would become perilous or impossible; there would be an end to all confidence, all forethought; no one would be safe in making the simplest social arrangements; in a word, civilization might relapse into barbarism.

Am I going too fast to carry my Readers with me to these obvious conclusions? Surely a moment's reflection, and a single instance from common life, must convince everyone that our social system is based upon Regularity, or Equality of Angles. You meet, for example, two or three Tradesmen in the street, whom your recognize at once to be Tradesman by a glance at their angles and rapidly bedimmed sides, and you ask them to step into your house to lunch. This you do at present with perfect confidence, because everyone knows to an inch or two the area occupied by an adult Triangle: but imagine that your Tradesman drags behind his regular and respectable vertex, a parallelogram of twelve or thirteen inches in diagonal:—what are you to do with such a monster sticking fast in your house door?

But I am insulting the intelligence of my Readers by accumulating details which must be patent to everyone who enjoys the advantages of a Residence in Spaceland. Obviously the measurements of a single angle would no
longer be sufficient under such portentous circumstances; one's whole life would be taken up in feeling or surveying the perimeter of one's acquaintances. Already the difficulties of avoiding a collision in a crowd are enough to tax the sagacity of even a well-educated Square; but if no one could calculate the Regularity of a single figure in the company, all would be chaos and confusion, and the slightest panic would cause serious injuries, or—if there happened to be any Women or Soldiers present—perhaps considerable loss of life.

Expediency therefore concurs with Nature in stamping the seal of its approval upon Regularity of conformation: nor has the Law been backward in seconding their efforts. "Irregularity of Figure" means with us the same as, or more than, a combination of moral obliquity and criminality with you, and is treated accordingly. There are not wanting, it is true, some promulgators of paradoxes who maintain that there is no necessary connection between geometrical and moral Irregularity. "The Irregular," they say, "is from his birth scouted by his own parents, derided by his brothers and sisters, neglected by the domestics, scorned and suspected by society, and excluded from all posts of responsibility, trust, and useful activity. His every movement is jealously watched by the police till he comes of age and presents himself for inspection; then he is either destroyed, if he is found to exceed the fixed margin of deviation, at an uninteresting occupation for a miserable stipend; obliged to live and board at the office, and to take even his vacation under close supervision; what wonder that human nature, even in the best and purest, is embittered and perverted by such surroundings!"

All this very plausible reasoning does not convince me, as it has not convinced the wisest of our Statesmen, that our ancestors erred in laying it down as an axiom of policy that the toleration of Irregularity is incompatible with the safety of the State. Doubtless, the life of an Irregular is hard; but the interests of the Greater Number require that it shall be hard. If a man with a triangular front and a polygonal back were allowed to exist and to propagate a still more Irregular posterity, what would become of the arts of life? Are the houses and doors and churches in Flatland to be altered in order to accommodate such monsters? Are our ticket-collectors to be required to measure every man's perimeter before they allow him to enter a theatre, or to take his place in a lecture room? Is an Irregular to be exempted from the militia? And if not, how is he to be prevented from carrying desolation into the ranks of his comrades? Again, what irresistible temptations to fraudulent impostures must needs beset such a creature! How easy for him to enter a shop with his polygonal front foremost, and to order goods to any extent from a confiding tradesman! Let the advocates of a falsely called Philanthropy plead as they may for the abrogation of the Irregular Penal Laws, I for my part have never known an Irregular who was not also what Nature evidently intended him to be—a hypocrite, a misanthropist, and, up to the limits of his power, a perpetrator of all manner of mischief.

Not that I should be disposed to recommend (at present) the extreme measures adopted by some States, where an infant whose angle deviates by half a degree from the correct angularity is summarily destroyed at birth. Some of our highest and ablest men, men of real genius, have during their earliest days laboured under deviations as great as, or even greater than forty-five minutes; and the loss of their precious lives would have been an irreparable injury to the State. The art of healing also has achieved some of its most glorious triumphs in the compressions, extensions, trepannings, colligations, and other surgical or diaetetic operations by which Irregularity has been partly or wholly cured. Advocating therefore a VIA MEDIA, I would lay down no fixed or absolute line of demarcation; but at the period when the frame is just beginning to set, and when the Medical Board has reported that recovery is improbably, I would suggest that the Irregular offspring be painlessly and mercifully consumed.

SECTION 8 Of the Ancient Practice of Painting

If my Readers have followed me with any attention up to this point, they will not be surprised to hear that life is somewhat dull in Flatland. I do not, of course, mean that there are not battles, conspiracies, tumults, factions, and all those other phenomena which are supposed to make History interesting; nor would I deny that the strange mixture of the problems of life and the problems of Mathematics, continually inducing conjecture and giving an opportunity of immediate verification, imparts to our existence a zest which you in Spaceland can hardly comprehend. I speak now from the aesthetic and artistic point of view when I say that life with us is dull; aesthetically and artistically, very dull indeed.

How can it be otherwise, when all one's prospect, all one's landscapes, historical pieces, portraits, flowers, still life, are nothing but a single line, with no varieties except degrees of brightness and obscurity?

It was not always thus. Colour, if Tradition speaks the truth, once for the space of half a dozen centuries or more, threw a transient splendour over the lives of our ancestors in the remotest ages. Some private individual—a Pentagon whose name is variously reported—having casually discovered the constituents of the simpler colours and a rudimentary method of painting, is said to have begun by decorating first his house, then his slaves, then his Father, his Sons, and Grandsons, lastly himself. The convenience as well as the beauty of the results commended themselves to all. Wherever Chromatistes,—for by that name the most trustworthy authorities concur in calling him,—turned his variegated frame, there he at once excited attention, and attracted respect. No one now needed to "feel" him; no one mistook his front for his back; all his movements were readily ascertained by his neighbours without the
classes should be recognized as absolutely equal and entitled to equal rights.

of aristocratic distinctions, the Law should follow in the same path, and that henceforth all individuals and all

and Feeling. Soon, they began to insist that inasmuch as Colour, which was a second Nature, had destroyed the need

aristocratic Arts" and the consequent abolition of all endowments for the studies of Sight Recognition, Mathematics,

Sight Recognition was falling, they began boldly to demand the legal prohibition of all "monopolizing and

Statical or Kinetical, by the simple process of Colour Recognition. Not content with the natural neglect into which

equality with the latter, and enabled to grapple with all the difficulties and solve all the problems of life, whether

was no great difference between them and the very highest class of Polygons, now that they were raised to an

wholesome effect of at once taming their brutal nature and thinning their excessive numbers.

more insolent on the strength of their immunity from the old burden which had formerly exercised the twofold

pay the customary tribute from the Criminal classes to the service of Education, waxed daily more numerous and

Schools. Then the Isosceles classes, asserting that the Specimens were no longer used nor needed, and refusing to

Statics, Kinetics, and other kindred subjects, came soon to be considered superfluous, and fell into disrespect and

whatever rhythm still remains in the more scientific utterance of those modern days.

The commonest utterances of the commonest citizens in the time of the Colour Revolt seem to have been suffused

development of these days must have been in part indicated by the very language and vocabulary of the period.

overcome by the artistic beauty of the forces under his command, threw aside his marshal's baton and his royal

camp—all these may well have been sufficient to render credible the famous story how an illustrious Circle,

coloured Pentagons and Hexagons careering across the field in their offices of surgeons, geometricians and aides-de-

Triangles tricoloured in red, white, and blue; the mauve, ultra-marine, gamboge, and burnt umber of the Square

black of their bases for the orange of the two sides including their acute angle; the militia of the Equilateral

actors; but most ravishing of all is said to have been the unspeakable magnificence of a military review.

assembly in a church or theatre are said to have more than once proved too distracting from our greatest teachers and

living implied seeing. Even at a small party, the company was a pleasure to behold; the richly varied hues of the

that never ripened into manhood, nor even reached the blossom of youth. To live then in itself a delight, because

of view, those ancient days of the Colour Revolt were the glorious childhood of Art in Flatland—a childhood, alas,

but the very highest of the Nobility. Needless to say, the custom soon made its way from the district of Chromatistes
to surrounding regions; and within two generations no one in all Flatland was colourless except the Women and the

Priests. Here Nature herself appeared to erect a barrier, and to plead against extending the innovations to these two
classes. Many-sidedness was almost essential as a pretext for the Innovators. "Distinction of sides is intended by

Nature to imply distinction of colours"—such was the sophism which in those days flew from mouth to mouth,

converting whole towns at a time to a new culture. But manifestly to our Priests and Women this adage did not

apply. The latter had only one side, and therefore—plurally and pedantically speaking—NO SIDES. The former—if

at least they would assert their claim to be readily and truly Circles, and not mere high-class Polygons, with an

infinitely large number of infinitesimally small sides—were in the habit of boasting (what Women confessed and
declared) that they also had no sides, being blessed with a perimeter of only one line, or, in other words, a

Circumference. Hence it came to pass that these two Classes could see no force in the so-called axiom about

"Distinction of Sides implying Distinction of Colour;" and when all others had succumbed to the fascinations of
corporal decoration, the Priests and the Women alone still remained pure from the pollution of paint.

Immoral, licentious, anarchical, unscientific—call them by what names you will—but, from an aesthetic point

of view, those ancient days of the Colour Revolt were the glorious childhood of Art in Flatland—a childhood, alas,
that never ripened into manhood, nor even reached the blossom of youth. To live then in itself a delight, because

living implied seeing. Even at a small party, the company was a pleasure to behold; the richly varied hues of the

assembly in a church or theatre are said to have more than once proved too distracting from our greatest teachers and

actors; but most ravishing of all is said to have been the unspeakable magnificence of a military review.

The sight of a line of battle of twenty thousand Isosceles suddenly facing about, and exchanging the sombre

black of their bases for the orange of the two sides including their acute angle; the militia of the Equilateral

Triangles tricoloured in red, white, and blue; the mauve, ultra-marine, gamboge, and burnt umber of the Square

artillerymen rapidly rotating near their vermilion guns; the dashing and flashing of the five-coloured and six-

coloured Pentagons and Hexagons careering across the field in their offices of surgeons, geometricians and aides-de-
camp—all these may well have been sufficient to render credible the famous story how an illustrious Circle,

overcome by the artistic beauty of the forces under his command, threw aside his marshal's baton and his royal

crown, exclaiming that he henceforth exchanged them for the artist's pencil. How great and glorious the sensuous
development of these days must have been is in part indicated by the very language and vocabulary of the period.

The commonest utterances of the commonest citizens in the time of the Colour Revolt seem to have been suffused

with a richer tinge of word or thought; and to that era we are even now indebted for our finest poetry and for

whatever rhythm still remains in the more scientific utterance of those modern days.

SECTION 9 Of the Universal Colour Bill

But meanwhile the intellectual Arts were fast decaying.

The Art of Sight Recognition, being no longer needed, was no longer practised; and the studies of Geometry,
Statics, Kinetics, and other kindred subjects, came soon to be considered superfluous, and fell into disrespect and

neglect even at our University. The inferior Art of Feeling speedily experienced the same fate at our Elementary
Schools. Then the Isosceles classes, asserting that the Specimens were no longer used nor needed, and refusing to

pay the customary tribute from the Criminal classes to the service of Education, waxed daily more numerous and

more insolent on the strength of their immunity from the old burden which had formerly exercised the twofold

wholesome effect of at once taming their brutal nature and thinning their excessive numbers.

Year by year the Soldiers and Artisans began more vehemently to assert—and with increasing truth—that there

was no great difference between them and the very highest class of Polygons, now that they were raised to an

equality with the latter, and enabled to grapple with all the difficulties and solve all the problems of life, whether

Statical or Kinetical, by the simple process of Colour Recognition. Not content with the natural neglect into which

Sight Recognition was falling, they began boldly to demand the legal prohibition of all "monopolizing and

aristocratic Arts" and the consequent abolition of all endowments for the studies of Sight Recognition, Mathematics,
and Feeling. Soon, they began to insist that inasmuch as Colour, which was a second Nature, had destroyed the need
of aristocratic distinctions, the Law should follow in the same path, and that henceforth all individuals and all

classes should be recognized as absolutely equal and entitled to equal rights.
Finding the higher Orders wavering and undecided, the leaders of the Revolution advanced still further in their requirements, and at last demanded that all classes alike, the Priests and the Women not excepted, should do homage to Colour by submitting to be painted. When it was objected that Priests and Women had no sides, they retorted that Nature and Expediency concurred in dictating that the front half of every human being (that is to say, the half containing his eye and mouth) should be distinguishable from his hinder half. They therefore brought before a general and extraordinary Assembly of all the States of Flatland a Bill proposing that in every Woman the half containing the eye and mouth should be coloured red, and the other half green. The Priests were to be painted in the same way, red being applied to that semicircle in which the eye and mouth formed the middle point; while the other or hinder semicircle was to be coloured green.

There was no little cunning in this proposal, which indeed emanated not from any Isosceles—for no being so degraded would have agility enough to appreciate, much less to devise, such a model of state-craft—but from an Irregular Circle who, instead of being destroyed in his childhood, was reserved by a foolish indulgence to bring desolation on his country and destruction on myriads of followers.

On the one hand the proposition was calculated to bring the Women in all classes over to the side of the Chromatic Innovation. For by assigning to the Women the same two colours as were assigned to the Priests, the Revolutionists thereby ensured that, in certain positions, every Woman would appear as a Priest, and be treated with corresponding respect and deference—a prospect that could not fail to attract the Female Sex in a mass.

But by some of my Readers the possibility of the identical appearance of Priests and Women, under a new Legislation, may not be recognized; if so, a word or two will make it obvious.

Imagine a woman duly decorated, according to the new Code; with the front half (i.e., the half containing the eye and mouth) red, and with the hinder half green. Look at her from one side. Obviously you will see a straight line, HALF RED, HALF GREEN.

Now imagine a Priest, whose mouth is at M, and whose front semicircle (AMB) is consequently coloured red, while his hinder semicircle is green; so that the diameter AB divides the green from the red. If you contemplate the Great Man so as to have your eye in the same straight line as his dividing diameter (AB), what you will see will be a straight line (CBD), of which ONE HALF (CB) WILL BE RED, AND THE OTHER (BD) GREEN. The whole line (CD) will be rather shorter perhaps than that of a full-sized Woman, and will shade off more rapidly towards its extremities; but the identity of the colours would give you an immediate impression of identity in Class, making you neglectful of other details. Bear in mind the decay of Sight Recognition which threatened society at the time of the Colour revolt; add too the certainty that Woman would speedily learn to shade off their extremities so as to imitate the Circles; it must then be surely obvious to you, my dear Reader, that the Colour Bill placed us under a great danger of confounding a Priest with a young Woman.

How attractive this prospect must have been to the Frail Sex may readily be imagined. They anticipated with delight the confusion that would ensue. At home they might hear political and ecclesiastical secrets intended not for them but for their husbands and brothers, and might even issue some commands in the name of a priestly Circle; out of doors the striking combination of red and green without addition of any other colours, would be sure to lead the common people into endless mistakes, and the Woman would gain whatever the Circles lost, in the deference of the passers by. As for the scandal that would befall the Circular Class if the frivolous and unseemly conduct of the Women were imputed to them, and as to the consequent subversion of the Constitution, the Female Sex could not be expected to give a thought to these considerations. Even in the households of the Circles, the Women were all in favour of the Universal Colour Bill.

The second object aimed at by the Bill was the gradual demoralization of the Circles themselves. In the general intellectual decay they still preserved their pristine clearness and strength of understanding. From their earliest childhood, familiarized in their Circular households with the total absence of Colour, the Nobles alone preserved the Sacred Art of Sight Recognition, with all the advantages that result from that admirable training of the intellect.

Hence, up to the date of the introduction of the Universal Colour Bill, the Circles had not only held their own, but even increased their lead of the other classes by abstinence from the popular fashion.

Now therefore the artful Irregular whom I described above as the real author of this diabolical Bill, determined at one blow to lower the status of the Hierarchy by forcing them to submit to the pollution of Colour, and at the same time to destroy their domestic opportunities of training in the Art of Sight Recognition, so as to enfeeble their intellects by depriving them of their pure and colourless homes. Once subjected to the chromatic taint, every parental and every childish Circle would demoralize each other. Only in discerning between the Father and the Mother would the Circular infant find problems for the exercise of his understanding—problems too often likely to be corrupted by maternal impostures with the result of shaking the child's faith in all logical conclusions. Thus by degrees the intellectual lustre of the Priestly Order would wane, and the road would then lie open for a total destruction of all Aristocratic Legislature and for the subversion of our Privileged Classes.
SECTION 10 Of the Suppression of the Chromatic Sedition

The agitation for the Universal Colour Bill continued for three years; and up to the last moment of that period it seemed as though Anarchy were destined to triumph.

A whole army of Polygons, who turned out to fight as private soldiers, was utterly annihilated by a superior force of Isosceles Triangles—the Squares and Pentagons meanwhile remaining neutral.

Worse than all, some of the ablest Circles fell a prey to conjugal fury. Infuriated by political animosity, the wives in many a noble household wearied their lords with prayers to give up their opposition to the Colour Bill; and some, finding their entreaties fruitless, fell on and slaughtered their innocent children and husband, perishing themselves in the act of carnage. It is recorded that during that triennial agitation no less than twenty-three Circles perished in domestic discord.

Great indeed was the peril. It seemed as though the Priests had no choice between submission and extermination; when suddenly the course of events was completely changed by one of those picturesque incidents which Statesmen ought never to neglect, often to anticipate, and sometimes perhaps to originate, because of the absurdly disproportionate power with which they appeal to the sympathies of the populace.

It happened that an Isosceles of a low type, with a brain little if at all above four degrees—accidentally dabbling in the colours of some Tradesman whose shop he had plundered—painted himself, or caused himself to be painted (for the story varies) with the twelve colours of a Dodecagon. Going into the Market Place he accosted in a feigned voice a maiden, the orphan daughter of a noble Polygon, whose affection in former days he had sought in vain; and by a series of deceptions—aided, on the one side, by a string of lucky accidents too long to relate, and, on the other, by an almost inconceivable fatuity and neglect of ordinary precautions on the part of the relations of the bride—he succeeded in consummating the marriage. The unhappy girl committed suicide on discovering the fraud to which she had been subjected.

When the news of this catastrophe spread from State to State the minds of the Women were violently agitated. Sympathy with the miserable victim and anticipations of similar deceptions for themselves, their sisters, and their daughters, made them now regard the Colour Bill in an entirely new aspect. Not a few openly avowed themselves converted to antagonism; the rest needed only a slight stimulus to make a similar avowal. Seizing this favourable opportunity, the Circles hastily convened an extraordinary Assembly of the States; and besides the usual guard of Convicts, they secured the attendance of a large number of reactionary Women.

Amidst an unprecedented concourse, the Chief Circle of those days—by name Pantocyclus—arose to find himself hissed and hooted by a hundred and twenty thousand Isosceles. But he secured silence by declaring that henceforth the Circles would enter on a policy of Concession; yielding to the wishes of the majority, they would accept the Colour Bill. The uproar being at once converted to applause, he invited Chromatistes, the leader of the Sedition, into the centre of the hall, to receive in the name of his followers the submission of the Hierarchy. Then followed a speech, a masterpiece of rhetoric, which occupied nearly a day in the delivery, and to which no summary can do justice.

With a grave appearance of impartiality he declared that as they were now finally committing themselves to Reform or Innovation, it was desirable that they should take one last view of the perimeter of the whole subject, its defects as well as its advantages. Gradually introduction the mention of the dangers to the Tradesmen, the Professional Classes and the Gentlemen, he silenced the rising murmers of the Isosceles by reminding them that, in spite of all these defects, he was willing to accept the Bill if it was approved by the majority. But it was manifest that all, except the Isosceles, were moved by his words and were either neutral or averse to the Bill.

Turning now to the Workmen he asserted that their interests must not be neglected, and that, if they intended to accept the Colour Bill, they ought at least to do so with full view of the consequences. Many of them, he said, were on the point of being admitted to the class of the Regular Triangles; others anticipated for their children a distinction they could not hope for themselves. That honourable ambition would not have to be sacrificed. With the universal adoption of Colour, all distinctions would cease; Regularity would be confused with Irregularity; development would give place to retrogression; the Workman would in a few generations be degraded to the level of the Military, or even the Convict Class; political power would be in the hands of the greatest number, that is to say the Criminal Classes, who were already more numerous than the Workmen, and would soon out-number all the other Classes put together when the usual Compensative Laws of Nature were violated.

A subdued murmur of assent ran through the ranks of the Artisans, and Chromatistes, in alarm, attempted to step forward and address them. But he found himself encompassed with guards and forced to remain silent while the Chief Circle in a few impassioned words made a final appeal to the Women, exclaiming that, if the Colour Bill passed, no marriage would henceforth be safe, no woman's honour secure; fraud, deception, hypocrisy would pervade every household; domestic bliss would share the fate of the Constitution and pass to speedy perdition. "Sooner than this," he cried, "come death."
At these words, which were the preconcerted signal for action, the Isosceles Convicts fell on and transfixed the wretched Chromatistes; the Regular Classes, opening their ranks, made way for a band of Women who, under direction of the Circles, moved back foremost, invisibly and unerringly upon the unconscious soldiers; the Artisans, imitating the example of their betters, also opened their ranks. Meantime bands of Convicts occupied every entrance with an impenetrable phalanx.

The battle, or rather carnage, was of short duration. Under the skilful generalship of the Circles almost every Woman's charge was fatal and very many extracted their sting uninjured, ready for a second slaughter. But no second blow was needed; the rabble of the Isosceles did the rest of the business for themselves. Surprised, leaderless, attacked in front by invisible foes, and finding egress cut off by the Convicts behind them, they at once—after their manner—lost all presence of mind, and raised the cry of "treachery." This sealed their fate. Every Isosceles now saw and felt a foe in every other. In half an hour not one of that vast multitude was living; and the fragments of seven score thousand of the Criminal Class slain by one another's angles attested the triumph of Order.

The Circles delayed not to push their victory to the uttermost. The Working Men they spared but decimated. The Militia of the Equilaterals was at once called out, and every Triangle suspected of Irregularity on reasonable grounds, was destroyed by Court Martial, without the formality of exact measurement by the Social Board. The homes of the Military and Artisan classes were inspected in a course of visitation extending through upwards of a year; and during that period every town, village, and hamlet was systematically purged of that excess of the lower orders which had been brought about by the neglect to pay the tribute of Criminals to the Schools and University, and by the violation of other natural Laws of the Constitution of Flatland. Thus the balance of classes was again restored.

Needless to say that henceforth the use of Colour was abolished, and its possession prohibited. Even the utterance of any word denoting Colour, except by the Circles or by qualified scientific teachers, was punished by a severe penalty. Only at our University in some of the very highest and most esoteric classes—which I myself have never been privileged to attend—it is understood that the sparing use of Colour is still sanctioned for the purpose of illustrating some of the deeper problems of mathematics. But of this I can only speak from hearsay.

Elsewhere in Flatland, Colour is now non-existent. The art of making it is known to only one living person, the Chief Circle for the time being; and by him it is handed down on his death-bed to none but his Successor. One manufactory alone produces it; and, lest the secret should be betrayed, the Workmen are annually consumed, and fresh ones introduced. So great is the terror with which even now our Aristocracy looks back to the far-distant days of the agitation for the Universal Colour Bill.

SECTION 11 Concerning our Priests

It is high time that I should pass from these brief and discursive notes about things in Flatland to the central event of this book, my initiation into the mysteries of Space. THAT is my subject; all that has gone before is merely preface.

For this reason I must omit many matters of which the explanation would not, I flatter myself, be without interest for my Readers: as for example, our method of propelling and stopping ourselves, although destitute of feet; the means by which we give fixity to structures of wood, stone, or brick, although of course we have no hands, nor can we lay foundations as you can, nor avail ourselves of the lateral pressure of the earth; the manner in which the rain originates in the intervals between our various zones, so that the northern regions do not intercept the moisture falling on the southern; the nature of our hills and mines, our trees and vegetables, our seasons and harvests; our Alphabet and method of writing, adapted to our linear tablets; these and a hundred other details of our physical existence I must pass over, nor do I mention them now except to indicate to my Readers that their omission proceeds not from forgetfulness on the part of the author, but from his regard for the time of the Reader.

Yet before I proceed to my legitimate subject some few final remarks will no doubt be expected by my Readers upon these pillars and mainstays of the Constitution of Flatland, the controllers of our conduct and shapers of our destiny, the objects of universal homage and almost of adoration: need I say that I mean our Circles or Priests?

When I call them Priests, let me not be understood as meaning no more than the term denotes with you. With us, our Priests are Administrators of all Business, Art, and Science; Directors of Trade, Commerce, Generalship, Architecture, Engineering, Education, Statesmanship, Legislature, Morality, Theology; doing nothing themselves, they are the Causes of everything worth doing, that is done by others.

Although popularly everyone called a Circle is deemed a Circle, yet among the better educated Classes it is known that no Circle is really a Circle, but only a Polygon with a very large number of very small sides. As the number of the sides increases, a Polygon approximates to a Circle; and, when the number is very great indeed, say for example three or four hundred, it is extremely difficult for the most delicate touch to feel any polygonal angles. Let me say rather it WOULD be difficult: for, as I have shown above, Recognition by Feeling is unknown among the highest society, and to FEEL a Circle would be considered a most audacious insult. This habit of abstention from
Feeling in the best society enables a Circle the more easily to sustain the veil of mystery in which, from his earliest years, he is wont to enwrap the exact nature of his Perimeter or Circumference. Three feet being the average Perimeter it follows that, in a Polygon of three hundred sides each side will be no more than the hundredth part of a foot in length, or little more than the tenth part of an inch; and in a Polygon of six or seven hundred sides the sides are little larger than the diameter of a Spaceland pin-head. It is always assumed, by courtesy, that the Chief Circle for the time being has ten thousand sides.

The ascent of the posterity of the Circles in the social scale is not restricted, as it is among the lower Regular classes, by the Law of Nature which limits the increase of sides to one in each generation. If it were so, the number of sides in the Circle would be a mere question of pedigree and arithmetic, and the four hundred and ninety-seventh descendant of an Equilateral Triangle would necessarily be a polygon with five hundred sides. But this is not the case. Nature's Law prescribes two antagonistic decrees affecting Circular propagation; first, that as the race climbs higher in the scale of development, so development shall proceed at an accelerated pace; second, that in the same proportion, the race shall become less fertile. Consequently in the home of a Polygon of four or five hundred sides it is rare to find a son; more than one is never seen. On the other hand the son of a five-hundred-sided Polygon has been known to possess five hundred and fifty, or even six hundred sides.

Art also steps in to help the process of higher Evolution. Our physicians have discovered that the small and tender sides of an infant Polygon of the higher class can be fractured, and his whole frame re-set, with such exactness that a Polygon of two or three hundred sides sometimes—by no means always, for the process is attended with serious risk—but sometimes overlies two or three hundred generations, and as it were double at a stroke, the number of his progenitors and the nobility of his descent.

Many a promising child is sacrificed in this way. Scarcely one out of ten survives. Yet so strong is the parental ambition among those Polygons who are, as it were, on the fringe of the Circular class, that it is very rare to find the Nobleman of that position in society, who has neglected to place his first-born in the Circular Neo-Therapeutic Gymnasium before he has attained the age of a month.

One year determines success or failure. At the end of that time the child has, in all probability, added one more to the tombstones that crowd the Neo-Therapeutic Cemetery; but on rare occasion a glad procession bears back the little one to his exultant parents, no longer a Polygon, but a Circle, at least by courtesy: and a single instance of so blessed a result induces multitudes of Polygonal parents to submit to similar domestic sacrifice, which have a dissimilar issue.

SECTION 12 Of the Doctrine of our Priests

As to the doctrine of the Circles it may briefly be summed up in a single maxim, "Attend to your Configuration." Whether political, ecclesiastical, or moral, all their teaching has for its object the improvement of individual and collective Configuration—with special reference of course to the Configuration of the Circles, to which all other objects are subordinated.

It is the merit of the Circles that they have effectually suppressed those ancient heresies which led men to waste energy and sympathy in the vain belief that conduct depends upon will, effort, training, encouragement, praise, or anything else but Configuration. It was Pantoclycus—the illustrious Circle mentioned above, as the queller of the Colour Revolt—who first convinced mankind that Configuration makes the man; that if, for example, you are born an Isosceles with two uneven sides, you will assuredly go wrong unless you have them made even—for which purpose you must go to the Isosceles Hospital; similarly, if you are a Triangle, or Square, or even a Polygon, born with any Irregularity, you must be taken to one of the Regular Hospitals to have your disease cured; otherwise you will end your days in the State Prison or by the angle of the State Executioner.

All faults or defects, from the slightest misconduct to the most flagitious crime, Pantoclycus attributed to some deviation from perfect Regularity in the bodily figure, caused perhaps (if not congenital) by some collision in a crowd; by neglect to take exercise, or by taking too much of it; or even by a sudden change of temperature, resulting in a shrinkage or expansion in some too susceptible part of the frame. Therefore, concluded that illustrious Philosopher, neither good conduct nor bad conduct is a fit subject, in any sober estimation, for either praise or blame. For why should you praise, for example, the integrity of a Square who faithfully defends the interests of his client, when you ought in reality rather to admire the exact precision of his right angles? Or again, why blame a lying, thievish Isosceles, when you ought rather to deplore the incurable inequality of his sides?

Theoretically, this doctrine is unquestionable; but it has practical drawbacks. In dealing with an Isosceles, if a rascal pleads that he cannot help stealing because of his unevenness, you reply that for that very reason, because he cannot help being a nuisance to his neighbours, you, the Magistrate, cannot help sentencing him to be consumed—and there's an end of the matter. But in little domestic difficulties, when the penalty of consumption, or death, is out of the question, this theory of Configuration sometimes comes in awkwardly; and I must confess that occasionally when one of my own Hexagonal Grandsons pleads as an excuse for his disobedience that a sudden change of
temperature has been too much for his Perimeter, and that I ought to lay the blame not on him but on his
Configuration, which can only be strengthened by abundance of the choicest sweetmeats, I neither see my way
logically to reject, nor practically to accept, his conclusions.

For my own part, I find it best to assume that a good sound scolding or castigation has some latent and
strengthening influence on my Grandson's Configuration; though I own that I have no grounds for thinking so. At all
events I am not alone in my way of extricating myself from this dilemma; for I find that many of the highest Circles,
sitting as Judges in law courts, use praise and blame towards Regular and Irregular Figures; and in their homes I
know by experience that, when scolding their children, they speak about "right" and "wrong" as vehemently and
passionately as if they believe that these names represented real existence, and that a human Figure is really capable
of choosing between them.

Constantly carrying out their policy of making Configuration the leading idea in every mind, the Circles reverse
the nature of that Commandment which in Spaceland regulates the relations between parents and children. With you,
children are taught to honour their parents; with us—next to the Circles, who are the chief object of universal
homage—a man is taught to honour his Grandson, if he has one; or, if not, his Son. By "honour," however, is by no
means mean "indulgence," but a reverent regard for their highest interests: and the Circles teach that the duty of
fathers is to subordinate their own interests to those of posterity, thereby advancing the welfare of the whole State as
well as that of their own immediate descendants.

The weak point in the system of the Circles—if a humble Square may venture to speak of anything Circular as
containing any element of weakness—appears to me to be found in their relations with Women.

As it is of the utmost importance for Society that Irregular births should be discouraged, it follows that no
Woman who has any Irregularities in her ancestry is a fit partner for one who desires that his posterity should rise by
regular degrees in the social scale.

Now the Irregularity of a Male is a matter of measurement; but as all Women are straight, and therefore visibly
Regular so to speak, one has to devise some other means of ascertaining what I may call their invisible Irregularity,
that is to say their potential Irregularities as regards possible offspring. This is effected by carefully-kept pedigrees,
which are preserved and supervised by the State; and without a certified pedigree no Woman is allowed to marry.

Now it might have been supposed the a Circle—proud of his ancestry and regardful for a posterity which might
possibly issue hereafter in a Chief Circle—would be more careful than any other to choose a wife who had no blot
on her escutcheon. But it is not so. The care in choosing a Regular wife appears to diminish as one rises in the social
scale. Nothing would induce an aspiring Isosceles, who has hopes of generating an Equilateral Son, to take a wife
who reckoned a single Irregularity among her Ancestors; a Square or Pentagon, who is confident that his family is
steadily on the rise, does not inquire above the five-hundredth generation; a Hexagon or Dodecagon is even more
careless of the wife's pedigree; but a Circle has been known deliberately to take a wife who has had an Irregular
Great-Grandfather, and all because of some slight superiority of lustre, or because of the charms of a low voice—
which, with us, even more than with you, is thought "an excellent thing in a Woman."

Such ill-judged marriages are, as might be expected, barren, if they do not result in positive Irregularity or in
diminution of sides; but none of these evils have hitherto provided sufficiently deterrent. The loss of a few sides in a
highly-developed Polygon is not easily noticed, and is sometimes compensated by a successful operation in the Neo-
Therapeutic Gymnasium, as I have described above; and the Circles are too much disposed to acquiesce in
infecundity as a law of the superior development. Yet, if this evil be not arrested, the gradual diminution of the
Circular class may soon become more rapid, and the time may not be far distant when, the race being no longer able
to produce a Chief Circle, the Constitution of Flatland must fall.

One other word of warning suggest itself to me, though I cannot so easily mention a remedy; and this also
refers to our relations with Women. About three hundred years ago, it was decreed by the Chief Circle that, since
women are deficient in Reason but abundant in Emotion, they ought no longer to be treated as rational, nor receive
any mental education. The consequence was that they were no longer taught to read, nor even to master Arithmetic
enough to enable them to count the angles of their husband or children; and hence they sensibly declined during
each generation in intellectual power. And this system of female non-education or quietism still prevails.

My fear is that, with the best intentions, this policy has been carried so far as to react injuriously on the Male
Sex.

For the consequence is that, as things now are, we Males have to lead a kind of bi-lingual, and I may almost say
bidental, existence. With Women, we speak of "love," "duty," "right," "wrong," "pity," "hope," and other irrational
and emotional conceptions, which have no existence, and the fiction of which has no object except to control
feminine exuberances; but among ourselves, and in our books, we have an entirely different vocabulary and I may
also say, idiom. "Love" them becomes "the anticipation of benefits"; "duty" becomes "necessity" or "fitness"; and
other words are correspondingly transmuted. Moreover, among Women, we use language implying the utmost
deference for their Sex; and they fully believe that the Chief Circle Himself is not more devoutly adored by us than
they are: but behind their backs they are both regarded and spoken of—by all but the very young—as being little
better than "mindless organisms."

Our Theology also in the Women's chambers is entirely different from our Theology elsewhere.

Now my humble fear is that this double training, in language as well as in thought, imposes somewhat too
heavy a burden upon the young, especially when, at the age of three years old, they are taken from the maternal
care and taught to unlearn the old language—except for the purpose of repeating it in the presence of the Mothers and
Nurses—and to learn the vocabulary and idiom of science. Already methinks I discern a weakness in the grasp of
mathematical truth at the present time as compared with the more robust intellect of our ancestors three hundred
years ago. I say nothing of the possible danger if a Woman should ever surreptitiously learn to read and convey to
her Sex the result of her perusal of a single popular volume; nor of the possibility that the indiscretion or
disobedience of some infant Male might reveal to a Mother the secrets of the logical dialect. On the simple ground
of the enfeebling of the male intellect, I rest this humble appeal to the highest Authorities to reconsider the
regulations of Female education.

PART II
OTHER WORLDS
"O brave new worlds, That have such people in them!"
SECTION 13 How I had a Vision of Lineland

It was the last day but one of the 1999th year of our era, and the first day of the Long Vacation. Having amused
myself till a late hour with my favourite recreation of Geometry, I had retired to rest with an unsolved problem in
my mind. In the night I had a dream.

I saw before me a vast multitude of small Straight Lines (which I naturally assumed to be Women) interspersed
with other Beings still smaller and of the nature of lustrous points—all moving to and fro in one and the same
Straight Line, and, as nearly as I could judge, with the same velocity.

A noise of confused, multitudinous chirping or twittering issued from them at intervals as long as they were
moving; but sometimes they ceased from motion, and then all was silence.

Approaching one of the largest of what I thought to be Women, I accosted her, but received no answer. A
second and third appeal on my part were equally ineffectual. Losing patience at what appeared to me intolerable
rudeness, I brought my mouth to a position full in front of her mouth so as to intercept her motion, and loudly
repeated my question, "Woman, what signifies this concourse, and this strange and confused chirping, and this
monotonous motion to and fro in one and the same Straight Line?"

"I am no Woman," replied the small Line: "I am the Monarch of the world. But thou, whence intrudest thou
into my realm of Lineland?" Receiving this abrupt reply, I begged pardon if I had in any way startled or molested his
Royal Highness; and describing myself as a stranger I besought the King to give me some account of his dominions.
But I had the greatest possible difficulty in obtaining any information on points that really interested me; for the
Monarch could not refrain from constantly assuming that whatever was familiar to him must also be known to me
and that I was simulating ignorance in jest. However, by preserving questions I elicited the following facts:

It seemed that this poor ignorant Monarch—as he called himself—was persuaded that the Straight Line which
he called his Kingdom, and in which he passed his existence, constituted the whole of the world, and indeed the
whole of Space. Not being able either to move or to see, save in his Straight Line, he had no conception of anything
out of it. Though he had heard my voice when I first addressed him, the sounds had come to him in a manner so
contrary to his experience that he had made no answer, "seeing no man," as he expressed it, "and hearing a voice as
it were from my own intestines." Until the moment when I placed my mouth in his World, he had neither seen me,
nor heard anything except confused sounds beating against, what I called his side, but what he called his INSIDE or
STOMACH; nor had he even now the least conception of the region from which I had come. Outside his World, or
Line, all was a blank to him; nay, not even a blank, for a blank implies Space; say, rather, all was non-existent.

His subjects—of whom the small Lines were men and the Points Women—were all alike confined in motion
and eyesight to that single Straight Line, which was their World. It need scarcely be added that the whole of their
horizon was limited to a Point; nor could any one ever see anything but a Point. Man, woman, child, thing—each as
a Point to the eye of a Linelander. Only by the sound of the voice could sex or age be distinguished. Moreover, as
each individual occupied the whole of the narrow path, so to speak, which constituted his Universe, and no one
could move to the right or left to make way for passers by, it followed that no Linelander could ever pass another.
Once neighbours, always neighbours. Neighbourhood with them was like marriage with us. Neighbours remained
neighbours till death did them part.

Such a life, with all vision limited to a Point, and all motion to a Straight Line, seemed to me inexpressibly
dreary; and I was surprised to note that vivacity and cheerfulness of the King. Wondering whether it was possible,
amid circumstances so unfavourable to domestic relations, to enjoy the pleasures of conjugal union, I hesitated for some time to question his Royal Highness on so delicate a subject; but at last I plunged into it by abruptly inquiring as to the health of his family. "My wives and children," he replied, "are well and happy."

Staggered at this answer—for in the immediate proximity of the Monarch (as I had noted in my dream before I entered Lineland) there were none but Men—I ventured to reply, "Pardon me, but I cannot imagine how your Royal Highness can at any time either see or approach their Majesties, when there at least half a dozen intervening individuals, whom you can neither see through, nor pass by? Is it possible that in Lineland proximity is not necessary for marriage and for the generation of children?"

"How can you ask so absurd a question?" replied the Monarch. "If it were indeed as you suggest, the Universe would soon be depopulated. No, no; neighbourhood is needless for the union of hearts; and the birth of children is too important a matter to have been allowed to depend upon such an accident as proximity. You cannot be ignorant of this. Yet since you are pleased to affect ignorance, I will instruct you as if you were the veriest baby in Lineland. Know, then, that marriages are consummated by means of the faculty of sound and the sense of hearing.

"You are of course aware that every Man has two mouths or voices—as well as two eyes—a bass at one and a tenor at the other of his extremities. I should not mention this, but that I have been unable to distinguish your tenor in the course of our conversation." I replied that I had but one voice, and that I had not been aware that his Royal Highness had two. "That confirms my impression," said the King, "that you are not a Man, but a feminine Monstrosity with a bass voice, and an utterly uneducated ear. But to continue.

"Nature having herself ordained that every Man should wed two wives—" "Why two?" asked I. "You carry your affected simplicity too far," he cried. "How can there be a completely harmonious union without the combination of the Four in One, viz. the Bass and Tenor of the Man and the Soprano and Contralto of the two Women?" "But supposing," said I, "that a man should prefer one wife or three?" "It is impossible," he said, "it is as inconceivable as that two and one should make five, or that the human eye should see a Straight Line." I would have interrupted him; but he proceeded as follows:

"Once in the middle of each week a Law of Nature compels us to move to and fro with a rhythmic motion of more than usual violence, which continues for the time you would take to count a hundred and one. In the midst of this choral dance, at the fifty-first pulsation, the inhabitants of the Universe pause in full career, and each individual sends forth his richest, fullest, sweetest strain. It is in this decisive moment that all our marriages are made. So exquisite is the adaptation of Bass and Treble, of Tenor to Contralto, that oftentimes the Loved Ones, though twenty thousand leagues away, recognize at once the responsive note of their destined Lover; and, penetrating the paltry obstacles of distance, Love unites the three. The marriage in that instance consummated results in a threefold Male and Female offspring which takes its place in Lineland."

"What! Always threefold?" said I. "Must one wife then always have twins?"

"Bass-voice Monstrosity! yes," replied the King. "How else could the balance of the Sexes be maintained, if two girls were not born for every boy? Would you ignore the very Alphabet of Nature?" He ceased, speechless for fury; and some time elapsed before I could induce him to resume his narrative.

"You will not, of course, suppose that every bachelor among us finds his mate at the first wooing in this universal Marriage Chorus. On the contrary, the process is by most of us many times repeated. Few are the hearts whose happy lot is at once to recognize in each other's voice the partner intended for them by Providence, and to fly into a reciprocal and perfectly harmonious embrace. With most of us the courtship is of long duration. The Wooer's voices may perhaps accord with one of the future wives, but not with both; or not, at first, with either; or the Soprano and Contralto may not quite harmonize. In such cases Nature has provided that every weekly Chorus shall bring the three Lovers into closer harmony. Each trial of voice, each fresh discovery of discord, almost imperceptibly induces the less perfect to modify his or her vocal utterance so as to approximate to the more perfect. And after many trials and many approximations, the result is at last achieved. There comes a day at last when, while the wonted Marriage Chorus goes forth from universal Lineland, the three far-off Lovers suddenly find themselves in exact harmony, and, before they are aware, the wedded Triplet is rapt vocally into a duplicate embrace; and Nature rejoices over one more marriage and over three more births."

SECTION 14 How I vainly tried to explain the nature of Flatland

Thinking that it was time to bring down the Monarch from his raptures to the level of common sense, I determined to endeavour to open to him some glimpses of the truth, that is to say of the nature of things in Flatland. So I began thus: "How does your Royal Highness distinguish the shapes and positions of his subjects? I for my part noticed by the sense of sight, before I entered your Kingdom, that some of your people are lines and others Points; and that some of the lines are larger——" "You speak of an impossibility," interrupted the King; "you must have seen a vision; for to detect the difference between a Line and a Point by the sense of sight is, as every one knows, in the nature of things, impossible; but it can be detected by the sense of hearing, and by the same means my
shape can be exactly ascertained. Behold me—I am a Line, the longest in Lineland, over six inches of Space—" "Of Length," I ventured to suggest. "Fool," said he, "Space is Length. Interrupt me again, and I have done."

I apologized; but he continued scornfully, "Since you are impervious to argument, you shall hear with your ears how by means of my two voices I reveal my shape to my Wives, who are at this moment six thousand miles seventy yards two feet eight inches away, the one to the North, the other to the South. Listen, I call to them."

He chirruped, and then complacently continued: "My wives at this moment receiving the sound of one of my voice, closely followed by the other, and perceiving that the latter reaches them after an interval in which sound can traverse 6.457 inches, infer that one of my mouths is 6.457 inches further from them than the other, and accordingly know my shape to be 6.457 inches. But you will of course understand that my wives do not make this calculation every time they hear my two voices. They made it, once for all, before we were married. But they COULD make it at any time. And in the same way I can estimate the shape of any of my Male subjects by the sense of sound."

"But how," said I, "if a Man feigns a Woman's voice with one of his two voices, or so disguises his Southern voice that it cannot be recognized as the echo of the Northern? May not such deceptions cause great inconvenience? And have you no means of checking frauds of this kind by commanding your neighbouring subjects to feel one another?" This of course was a very stupid question, for feeling could not have answered the purpose; but I asked with the view of irritating the Monarch, and I succeeded perfectly.

"What!" cried he in horror, "explain your meaning." "Feel, touch, come into contact," I replied. "If you mean by FEELING," said the King, "approaching so close as to leave no space between two individuals, know, Stranger, that this offence is punishable in my dominions by death. And the reason is obvious. The frail form of a Woman, being liable to be shattered by such an approximation, must be preserved by the State; but since Women cannot be distinguished by the sense of sight from Men, the Law ordains universally that neither Man nor Woman shall be approached so closely as to destroy the interval between the approximator and the approximated.

"And indeed what possible purpose would be served by this illegal and unnatural excess of approximation which you call TOUCHING, when all the ends of so brutal and course a process are attained at once more easily and more exactly by the sense of hearing? As to your suggested danger of deception, it is non-existent: for the Voice, being the essence of one's Being, cannot be thus changed at will. But come, suppose that I had the power of passing through solid things, so that I could penetrate my subjects, one after another, even to the number of a billion, verifying the size and distance of each by the sense of FEELING: How much time and energy would be wasted in this clumsy and inaccurate method! Whereas now, in one moment of audition, I take as it were the census and statistics, local, corporeal, mental and spiritual, of every living being in Lineland. Hark, only hark!"

So saying he paused and listened, as if in an ecstasy, to a sound which seemed to me no better than a tiny chirping from an innumerable multitude of lilliputian grasshoppers.

"Truly," replied I, "your sense of hearing serves you in good stead, and fills up many of your deficiencies. But permit me to point out that your life in Lineland must be deplorably dull. To see nothing but a Point! Not even to be able to contemplate a Straight Line! Nay, not even to know what a Straight Line is! To see, yet to be cut off from those Linear prospects which are vouchsafed to us in Flatland! Better surely to have no sense of sight at all than to see so little! I grant you I have not your discriminative faculty of hearing; for the concert of all Lineland which gives you such intense pleasure, is to me no better than a multitudinous twittering or chirping. But at least I can discern, by sight, a Line from a Point. And let me prove it. Just before I came into your kingdom, I saw you dancing from left to right, and then from right to left, with Seven Men and a Woman in your immediate proximity on the left, and eight Men and two Women on your right. Is not this correct?"

"It is correct," said the King, "so far as the numbers and sexes are concerned, though I know not what you mean by 'right' and 'left.' But I deny that you saw these things. For how could you see the Line, that is to say the inside, of any Man? But you must have heard these things, and then dreamed that you saw them. And let me ask what you mean by those words 'left' and 'right.' I suppose it is your way of saying Northward and Southward."

"Not so," replied I; "besides your motion of Northward and Southward, there is another motion which I call from right to left."

King. Exhibit to me, if you please, this motion from left to right.
I. Nay, that I cannot do, unless you could step out of your Line altogether.
King. Out of my Line? Do you mean out of the world? Out of Space?
I. Well, yes. Out of YOUR world. Out of YOUR Space. For your Space is not the true Space. True Space is a Plane; but your Space is only a Line.
King. If you cannot indicate this motion from left to right by yourself moving in it, then I beg you to describe it to me in words.
I. If you cannot tell your right side from your left, I fear that no words of mine can make my meaning clearer to you. But surely you cannot be ignorant of so simple a distinction.
King. I do not in the least understand you.
I. Alas! How shall I make it clear? When you move straight on, does it not sometimes occur to you that you COULD move in some other way, turning your eye round so as to look in the direction towards which your side is now fronting? In other words, instead of always moving in the direction of one of your extremities, do you never feel a desire to move in the direction, so to speak, of your side?
King. Never. And what do you mean? How can a man's inside "front" in any direction? Or how can a man move in the direction of his inside?
I. Well then, since words cannot explain the matter, I will try deeds, and will move gradually out of Lineland in the direction which I desire to indicate to you.
At the word I began to move my body out of Lineland. As long as any part of me remained in his dominion and in his view, the King kept exclaiming, "I see you, I see you still; you are not moving." But when I had at last moved myself out of his Line, he cried in his shrillest voice, "She is vanished; she is dead." "I am not dead," replied I; "I am simply out of Lineland, that is to say, out of the Straight Line which you call Space, and in the true Space, where I can see things as they are. And at this moment I can see your Line, or side—or inside as you are pleased to call it; and I can see also the Men and Women on the North and South of you, whom I will now enumerate, describing their order, their size, and the interval between each."
When I had done this at great length, I cried triumphantly, "Does that at last convince you?" And, with that, I once more entered Lineland, taking up the same position as before.
But the Monarch replied, "If you were a Man of sense—though, as you appear to have only one voice I have little doubt you are not a Man but a Woman—but, if you had a particle of sense, you would listen to reason. You ask me to believe that there is another Line besides that which my senses indicate, and another motion besides that of which I am daily conscious. I, in return, ask you to describe in words or indicate by motion that other Line of which you speak. Instead of moving, you merely exercise some magic art of vanishing and returning to sight; and instead of any lucid description of your new World, you simply tell me the numbers and sizes of some forty of my retinue, facts known to any child in my capital. Can anything be more irrational or audacious? Acknowledge your folly or depart from my dominions."
Furious at his perversity, and especially indignant that he professed to be ignorant of my sex, I retorted in no measured terms, "Besotted Being! You think yourself the perfection of existence, while you are in reality the most imperfect and imbecile. You profess to see, whereas you see nothing but a Point! You plume yourself on inferring the existence of a Straight Line; but I CAN SEE Straight Lines, and infer the existence of Angles, Triangles, Squares, Pentagons, Hexagons, and even Circles. Why waste more words? Suffice it that I am the completion of your incomplete self. You are a Line, but I am a Line of Lines called in my country a Square: and even I, infinitely superior though I am to you, am of little account among the great nobles of Flatland, whence I have come to visit you, in the hope of enlightening your ignorance."
Hearing these words the King advanced towards me with a menacing cry as if to pierce me through the diagonal; and in that same movement there arose from myriads of his subjects a multitudinous war-cry, increasing in vehemence till at last methought it rivalled the roar of an army of a hundred thousand Isosceles, and the artillery of a thousand Pentagons. Spell-bound and motionless, I could neither speak nor move to avert the impending destruction; and still the noise grew louder, and the King came closer, when I awoke to find the breakfast-bell recalling me to the realities of Flatland.

SECTION 15 Concerning a Stranger from Spaceland
From dreams I proceed to facts.
It was the last day of our 1999th year of our era. The patterning of the rain had long ago announced nightfall; and I was sitting (footnote 3) in the company of my wife, musing on the events of the past and the prospects of the coming year, the coming century, the coming Millennium.
My four Sons and two orphan Grandchildren had retired to their several apartments; and my wife alone remained with me to see the old Millennium out and the new one in.
I was rapt in thought, pondering in my mind some words that had casually issued from the mouth of my youngest Grandson, a most promising young Hexagon of unusual brilliancy and perfect angularity. His uncles and I had been giving him his usual practical lesson in Sight Recognition, turning ourselves upon our centres, now rapidly, now more slowly, and questioning him as to our positions; and his answers had been so satisfactory that I had been induced to reward him by giving him a few hints on Arithmetic, as applied to Geometry.
Taking nine Squares, each an inch every way, I had put them together so as to make one large Square, with a side of three inches, and I had hence proved to my little Grandson that—though it was impossible for us to SEE the inside of the Square—yet we might ascertain the number of square inches in a Square by simply squaring the number of inches in the side: "and thus," said I, "we know that three-to-the-second, or nine, represents the number of
The little Hexagon meditated on this a while and then said to me; "But you have been teaching me to raise numbers to the third power: I suppose three-to-the-third must mean something in Geometry; what does it mean?"

"Nothing at all," replied I, "not at least in Geometry; for Geometry has only Two Dimensions." And then I began to shew the boy how a Point by moving through a length of three inches makes a Line of three inches, which may be represented by three; and how a Line of three inches, moving parallel to itself through a length of three inches, makes a Square of three inches every way, which may be represented by three-to-the-second. xxx Upon this, my Grandson, again returning to his former suggestion, took me up rather suddenly and exclaimed, "Well, then, if a Point by moving three inches, makes a Line of three inches represented by three; and if a straight Line of three inches, moving parallel to itself, makes a Square of three inches every way, represented by three-to-the-second; it must be that a Square of three inches every way, moving somehow parallel to itself (but I don't see how) must make Something else (but I don't see what) of three inches every way—and this must be represented by three-to-the-third."

"Go to bed," said I, a little ruffled by this interruption: "if you would talk less nonsense, you would remember more sense."

So my Grandson had disappeared in disgrace; and there I sat by my Wife's side, endeavouring to form a retrospect of the year 1999 and of the possibilities of the year 2000; but not quite able to shake off the thoughts suggested by the prattle of my bright little Hexagon. Only a few sands now remained in the half-hour glass. Rousing myself from my reverie I turned the glass Northward for the last time in the old Millennium; and in the act, I exclaimed aloud, "The boy is a fool."

Straightway I became conscious of a Presence in the room, and a chilling breath thrilled through my very being. "He is no such thing," cried my Wife, "and you are breaking the Commandments in thus dishonouring your own Grandson." But I took no notice of her. Looking around in every direction I could see nothing; yet still I FELT a Presence, and shivered as the cold whisper came again. I started up. "What is the matter?" said my Wife, "there is no draught; what are you looking for? There is nothing." There was nothing; and I resumed my seat, again exclaiming, "The boy is a fool, I say; three-to-the-third can have no meaning in Geometry." At once there came a distinctly audible reply, "The boy is not a fool; and three-to-the-third has an obvious Geometrical meaning."

My Wife as well as myself heard the words, although she did not understand their meaning, and both of us sprang forward in the direction of the sound. What was our horror when we saw before us a Figure! At the first glance it appeared to be a Woman, seen sideways; but a moment's observation shewed me that the extremities passed into dimness too rapidly to represent one of the Female Sex; and I should have thought it a Circle, only that it seemed to change its size in a manner impossible for a Circle or for any regular Figure of which I had had experience.

But my Wife had not my experience, nor the coolness necessary to note these characteristics. With the usual hastiness and unreasoning jealousy of her Sex, she flew at once to the conclusion that a Woman had entered the house through some small aperture. "How comes this person here?" she exclaimed, "you promised me, my dear, that there should be no ventilators in our new house." "Nor are they any," said I; "but what makes you think that the stranger is a Woman? I see by my power of Sight Recognition—"

"Oh, I have no patience with your Sight Recognition," replied she, "'Feeling is believing' and 'A Straight Line to the touch is worth a Circle to the sight'”—two Proverbs, very common with the Frailer Sex in Flatland.

"Well," said I, for I was afraid of irritating her, "if it must be so, demand an introduction." Assuming her most gracious manner, my Wife advanced towards the Stranger, "Permit me, Madam to feel and be felt by—" then, suddenly recoiling, "Oh! it is not a Woman, and there are no angles either, not a trace of one. Can it be that I have so misbehaved to a perfect Circle?"

"I am indeed, in a certain sense a Circle," replied the Voice, "and a more perfect Circle than any in Flatland; but to speak more accurately, I am many Circles in one." Then he added more mildly, "I have a message, dear Madam, to your husband, which I must not deliver in your presence; and, if you would suffer us to retire for a few minutes—" But my wife would not listen to the proposal that our august Visitor should so incommode himself, and assuring the Circle that the hour of her own retirement had long passed, with many reiterated apologies for her recent indiscretion, she at last retreated to her apartment.

I glanced at the half-hour glass. The last sands had fallen. The third Millennium had begun.

Footnote 3. When I say "sitting," of course I do not mean any change of attitude such as you in Spaceland signify by that word; for as we have no feet, we can no more "sit" nor "stand" (in your sense of the word) than one of your soles or flounders.

Nevertheless, we perfectly well recognize the different mental states of volition implied by "lying," "sitting,"
and "standing," which are to some extent indicated to a beholder by a slight increase of lustre corresponding to the increase of volition.

But on this, and a thousand other kindred subjects, time forbids me to dwell.

SECTION 16 How the Stranger vainly endeavoured to reveal to me in words the mysteries of Spaceland

As soon as the sound of the Peace-cry of my departing Wife had died away, I began to approach the Stranger with the intention of taking a nearer view and of bidding him be seated: but his appearance struck me dumb and motionless with astonishment. Without the slightest symptoms of angularity he nevertheless varied every instant with graduations of size and brightness scarcely possible for any Figure within the scope of my experience. The thought flashed across me that I might have before me a burglar or cut-throat, some monstrous Irregular Isosceles, who, by feigning the voice of a Circle, had obtained admission somehow into the house, and was now preparing to stab me with his acute angle.

In a sitting-room, the absence of Fog (and the season happened to be remarkably dry), made it difficult for me to trust to Sight Recognition, especially at the short distance at which I was standing. Desperate with fear, I rushed forward with an unceremonious, "You must permit me, Sir—" and felt him. My Wife was right. There was not the trace of an angle, not the slightest roughness or inequality: never in my life had I met with a more perfect Circle. He remained motionless while I walked around him, beginning from his eye and returning to it again. Circular he was throughout, a perfectly satisfactory Circle; there could not be a doubt of it. Then followed a dialogue, which I will endeavour to set down as near as I can recollect it, omitting only some of my profuse apologies—for I was covered with shame and humiliation that I, a Square, should have been guilty of the impertinence of feeling a Circle. It was commenced by the Stranger with some impatience at the lengthiness of my introductory process.

Stranger. Have you felt me enough by this time? Are you not introduced to me yet?

I. Most illustrious Sir, excuse my awkwardness, which arises not from ignorance of the usages of polite society, but from a little surprise and nervousness, consequent on this somewhat unexpected visit. And I beseech you to reveal my indiscretion to no one, and especially not to my Wife. But before your Lordship enters into further communications, would he deign to satisfy the curiosity of one who would gladly know whence his visitor came?

Stranger. From Space, from Space, Sir: whence else?

I. Pardon me, my Lord, but is not your Lordship already in Space, your Lordship and his humble servant, even at this moment?

Stranger. Pooh! what do you know of Space? Define Space.

I. Space, my Lord, is height and breadth indefinitely prolonged.

Stranger. Exactly: you see you do not even know what Space is. You think it is of Two Dimensions only; but I have come to announce to you a Third—height, breadth, and length.

I. Your Lordship is pleased to be merry. We also speak of length and height, or breadth and thickness, thus denoting Two Dimensions by four names.

Stranger. But I mean not only three names, but Three Dimensions.

I. Would your Lordship indicate or explain to me in what direction is the Third Dimension, unknown to me?

Stranger. I came from it. It is up above and down below.

I. My Lord means seemingly that it is Northward and Southward.

Stranger. I mean nothing of the kind. I mean a direction in which you cannot look, because you have no eye in your side.

I. Pardon me, my Lord, a moment's inspection will convince your Lordship that I have a perfectly luminary at the juncture of my two sides.

Stranger: Yes: but in order to see into Space you ought to have an eye, not on your Perimeter, but on your side, that is, on what you would probably call your inside; but we in Spaceland should call it your side.

I. An eye in my inside! An eye in my stomach! Your Lordship jests.

Stranger. I am in no jesting humour. I tell you that I come from Space, or, since you will not understand what Space means, from the Land of Three Dimensions whence I but lately looked down upon your Plane which you call Space forsooth. From that position of advantage I discerned all that you speak of as SOLID (by which you mean "enclosed on four sides"), your houses, your churches, your very chests and safes, yes even your insides and stomachs, all lying open and exposed to my view.

I. Such assertions are easily made, my Lord.

Stranger. But not easily proved, you mean. But I mean to prove mine.

When I descended here, I saw your four Sons, the Pentagons, each in his apartment, and your two Grandsons the Hexagons; I saw your youngest Hexagon remain a while with you and then retire to his room, leaving you and your Wife alone. I saw your Isosceles servants, three in number, in the kitchen at supper, and the little Page in the scullery. Then I came here, and how do you think I came?
I. Through the roof, I suppose.

Strange. Not so. Your roof, as you know very well, has been recently repaired, and has no aperture by which even a Woman could penetrate. I tell you I come from Space. Are you not convinced by what I have told you of your children and household?

I. Your Lordship must be aware that such facts touching the belongings of his humble servant might be easily ascertained by any one of the neighbourhood possessing your Lordship's ample means of information.

Stranger. (TO HIMSELF.) What must I do? Stay; one more argument suggests itself to me. When you see a Straight Line—your wife, for example—how many Dimensions do you attribute to her?

I. Your Lordship would treat me as if I were one of the vulgar who, being ignorant of Mathematics, suppose that a Woman is really a Straight Line, and only of One Dimension. No, no, my Lord; we Squares are better advised, and are as well aware of your Lordship that a Woman, though popularly called a Straight Line, is, really and scientifically, a very thin Parallelogram, possessing Two Dimensions, like the rest of us, viz., length and breadth (or thickness).

Stranger. But the very fact that a Line is visible implies that it possesses yet another Dimension.

I. My Lord, I have just acknowledged that a Woman is broad as well as long. We see her length, we infer her breadth; which, though very slight, is capable of measurement.

Stranger. You do not understand me. I mean that when you see a Woman, you ought—besides inferring her breadth—to see her length, and to see what we call her HEIGHT; although the last Dimension is infinitesimal in your country. If a Line were mere length without "height," it would cease to occupy Space and would become invisible. Surely you must recognize this?

I. I must indeed confess that I do not in the least understand your Lordship. When we in Flatland see a Line, we see length and BRIGHTNESS. If the brightness disappears, the Line is extinguished, and, as you say, ceases to occupy Space. But am I to suppose that your Lordship gives the brightness the title of a Dimension, and that what we call "bright" you call "high"?

Stranger. No, indeed. By "height" I mean a Dimension like your length: only, with you, "height" is not so easily perceptible, being extremely small.

I. My Lord, your assertion is easily put to the test. You say I have a Third Dimension, which you call "height." Now, Dimension implies direction and measurement. Do but measure my "height," or merely indicate to me the direction in which my "height" extends, and I will become your convert. Otherwise, your Lordship's own understand must hold me excused.

Stranger. (TO HIMSELF.) I can do neither. How shall I convince him? Surely a plain statement of facts followed by ocular demonstration ought to suffice. —Now, Sir; listen to me.

You are living on a Plane. What you style Flatland is the vast level surface of what I may call a fluid, or in, the top of which you and your countrymen move about, without rising above or falling below it.

I am not a plane Figure, but a Solid. You call me a Circle; but in reality I am not a Circle, but an infinite number of Circles, of size varying from a Point to a Circle of thirteen inches in diameter, one placed on the top of the other. When I cut through your plane as I am now doing, I make in your plane a section which you, very rightly, call a Circle. For even a Sphere—which is my proper name in my own country—if he manifest himself at all to an inhabitant of Flatland—must needs manifest himself as a Circle.

Do you not remember—for I, who see all things, discerned last night the phantasmal vision of Lineland written upon your brain—do you not remember, I say, how when you entered the realm of Lineland, you were compelled to manifest yourself to the King, not as a Square, but as a Line, because that Linear Realm had not Dimensions enough to represent the whole of you, but only a slice or section of you? In precisely the same way, your country of Two Dimensions is not spacious enough to represent me, a being of Three, but can only exhibit a slice or section of me, which is what you call a Circle.

The diminished brightness of your eye indicates incredulity. But now prepare to receive proof positive of the truth of my assertions. You cannot indeed see more than one of my sections, or Circles, at a time; for you have no power to raise your eye out of the plane of Flatland; but you can at least see that, as I rise in Space, so my sections become smaller. See now, I will rise; and the effect upon your eye will be that my Circle will become smaller and smaller till it dwindles to a point and finally vanishes.

There was no "rising" that I could see; but he diminished and finally vanished. I winked once or twice to make sure that I was not dreaming. But it was no dream. For from the depths of nowhere came forth a hollow voice—close to my heart it seemed—"Am I quite gone? Are you convinced now? Well, now I will gradually return to Flatland and you shall see my section become larger and larger."

Every reader in Spaceland will easily understand that my mysterious Guest was speaking the language of truth and even of simplicity. But to me, proficient though I was in Flatland Mathematics, it was by no means a simple
matter. The rough diagram given above will make it clear to any Spaceland child that the Sphere, ascending in the
three positions indicated there, must needs have manifested himself to me, or to any Flatlander, as a Circle, at first of
full size, then small, and at last very small indeed, approaching to a Point. But to me, although I saw the facts before
me, the causes were as dark as ever. All that I could comprehend was, that the Circle had made himself smaller and
vanished, and that he had now re-appeared and was rapidly making himself larger.

When he regained his original size, he heaved a deep sigh; for he perceived by my silence that I had altogether
failed to comprehend him. And indeed I was now inclining to the belief that he must be no Circle at all, but some
extremely clever juggler; or else that the old wives' tales were true, and that after all there were such people as
Enchanters and Magicians.

After a long pause he muttered to himself, "One resource alone remains, if I am not to resort to action. I must
try the method of Analogy." Then followed a still longer silence, after which he continued our dialogue.

Sphere. Tell me, Mr. Mathematician; if a Point moves Northward, and leaves a luminous wake, what name
would you give to the wake?
I. A straight Line.
Sphere. And a straight Line has how many extremities?
I. Two.
Sphere. Now conceive the Northward straight Line moving parallel to itself, East and West, so that every point
in it leaves behind it the wake of a straight Line. What name will you give to the Figure thereby formed? We will
suppose that it moves through a distance equal to the original straight line. —What name, I say?
I. A square.
Sphere. And how many sides has a Square? How many angles?
I. Four sides and four angles.
Sphere. Now stretch your imagination a little, and conceive a Square in Flatland, moving parallel to itself
upward.
I. What? Northward?
Sphere. No, not Northward; upward; out of Flatland altogether.
If it moved Northward, the Southern points in the Square would have to move through the positions previously
occupied by the Northern points. But that is not my meaning.
I mean that every Point in you—for you are a Square and will serve the purpose of my illustration—every Point
in you, that is to say in what you call your inside, is to pass upwards through Space in such a way that no Point shall
pass through the position previously occupied by any other Point; but each Point shall describe a straight Line of its
own. This is all in accordance with Analogy; surely it must be clear to you.

Restraining my impatience—for I was now under a strong temptation to rush blindly at my Visitor and to
precipitate him into Space, or out of Flatland, anywhere, so that I could get rid of him—I replied:—
"And what may be the nature of the Figure which I am to shape out by this motion which you are pleased to
denote by the word 'upward'? I presume it is describable in the language of Flatland."

Sphere. Oh, certainly. It is all plain and simple, and in strict accordance with Analogy—only, by the way, you
must not speak of the result as being a Figure, but as a Solid. But I will describe it to you. Or rather not I, but
Analogy.

We began with a single Point, which of course—being itself a
Point—has only ONE terminal Point.
One Point produces a Line with TWO terminal Points.
One Line produces a Square with FOUR terminal Points.
Now you can give yourself the answer to your own question: 1, 2, 4, are evidently in Geometrical Progression.
What is the next number?
I. Eight.
Sphere. Exactly. The one Square produces a SOMETHING-WHICH-YOU-DO-NOT-AS-YET-KNOW-A-
NAME-FOR-BUT-WHICH-WE-CALL-A-CUBE with EIGHT terminal Points. Now are you convinced?
I. And has this Creature sides, as well as Angles or what you call "terminal Points"?
Sphere. Of course; and all according to Analogy. But, by the way, not what YOU call sides, but what WE call
sides. You would call them SOLIDS?
I. And how many solids or sides will appertain to this Being whom I am to generate by the motion of my inside
in an "upward" direction, and whom you call a Cube?
Sphere. How can you ask? And you a mathematician! The side of anything is always, if I may so say, one
Dimension behind the thing. Consequently, as there is no Dimension behind a Point, a Point has 0 sides; a Line, if I
may so say, has 2 sides (for the points of a Line may be called by courtesy, its sides); a Square has 4 sides; 0, 2, 4;
what Progression do you call that?

I. Arithmetical.

Sphere. And what is the next number?

I. Six.

Sphere. Exactly. Then you see you have answered your own question. The Cube which you will generate will be bounded by six sides, that is to say, six of your insides. You see it all now, eh?

"Monster," I shrieked, "be thou juggler, enchanter, dream, or devil, no more will I endure thy mockery. Either thou or I must perish." And saying these words I precipitated myself upon him.

SECTION 17 How the Sphere, having in vain tried words, resorted to deeds

It was in vain. I brought my hardest right angle into violent collision with the Stranger, pressing on him with a force sufficient to have destroyed any ordinary Circle: but I could feel him slowly and unarrestably slipping from my contact; not edging to the right nor to the left, but moving somehow out of the world, and vanishing into nothing. Soon there was a blank. But still I heard the Intruder's voice.

Sphere. Why will you refuse to listen to reason? I had hoped to find in you—as being a man of sense and an accomplished mathematician—a fit apostle for the Gospel of the Three Dimensions, which I am allowed to preach once only in a thousand years: but now I know not how to convince you. Stay, I have it. Deeds, and not words, shall proclaim the truth. Listen, my friend.

I have told you I can see from my position in Space the inside of all things that you consider closed. For example, I see in yonder cupboard near which you are standing, several of what you call boxes (but like everything else in Flatland, they have no tops or bottom) full of money; I see also two tablets of accounts. I am about to descend into that cupboard and to bring you one of those tablets. I saw you lock the cupboard half an hour ago, and I know you have the key in your possession. But I descend from Space; the doors, you see, remain unmoved. Now I am in the cupboard and am taking the tablet. Now I have it. Now I ascend with it.

I rushed to the closet and dashed the door open. One of the tablets was gone. With a mocking laugh, the Stranger appeared in the other corner of the room, and at the same time the tablet appeared upon the floor. I took it up. There could be no doubt—it was the missing tablet.

I groaned with horror, doubting whether I was not out of my sense; but the Stranger continued: "Surely you must now see that my explanation, and no other, suits the phenomena. What you call Solid things are really superficial; what you call Space is really nothing but a great Plane. I am in Space, and look down upon the insides of the things of which you only see the outsides. You could leave the Plane yourself, if you could but summon up the necessary volition. A slight upward or downward motion would enable you to see all that I can see.

"The higher I mount, and the further I go from your Plane, the more I can see, though of course I see it on a smaller scale. For example, I am ascending; now I can see your neighbour the Hexagon and his family in their several apartments; now I see the inside of the Theatre, ten doors off, from which the audience is only just departing; and on the other side is a Circle in his study, sitting at his books. Now I shall come back to you. And, as a crowning proof, what do you say to my giving you a touch, just the least touch, in your stomach? It will not seriously injure you, and the slight pain may suffer cannot be compared with the mental benefit you will receive."

Before I could utter a word of remonstrance, I felt a shooting pain in my inside, and a demoniacal laugh seemed to issue from within me. A moment afterwards the sharp agony had ceased, leaving nothing but a dull ache behind, and the Stranger began to reappear, saying, as he gradually increased in size, "There, I have not hurt you much, have I? If you are not convinced now, I don't know what will convince you. What say you?"

My resolution was taken. It seemed intolerable that I should endure existence subject to the arbitrary visitations of a Magician who could thus play tricks with one's very stomach. If only I could in any way manage to pin him against the wall till help came!

Once more I dashed my hardest angle against him, at the same time alarming the whole household by my cries for aid. I believe, at the moment of my onset, the Stranger had sunk below our Plane, and really found difficulty in rising. In any case he remained motionless, while I, hearing, as I thought, the sound of some help approaching, pressed against him with redoubled vigor, and continued to shout for assistance.

A convulsive shudder ran through the Sphere. "This must not be," I thought I heard him say: "either he must listen to reason, or I must have recourse to the last resource of civilization." Then, addressing me in a louder tone, he hurriedly exclaimed, "Listen: no stranger must witness what you have witnessed. Send your Wife back at once, before she enters the apartment. The Gospel of Three Dimensions must not be thus frustrated. Not thus must the fruits of one thousand years of waiting be thrown away. I hear her coming. Back! back! Away from me, or you must go with me—wither you know not—into the Land of Three Dimensions!"

"Fool! Madman! Irregular!" I exclaimed; "never will I release thee; thou shalt pay the penalty of thine impostures."
"Ha! Is it come to this?" thundered the Stranger: "then meet your fate: out of your Plane you go. Once, twice, thrice! 'Tis done!"

SECTION 18 How I came to Spaceland, and what I saw there

An unspeakable horror seized me. There was a darkness; then a dizzy, sickening sensation of sight that was not like seeing; I saw a Line that was no Line; Space that was not Space: I was myself, and not myself. When I could find voice, I shrieked loud in agony, "Either this is madness or it is Hell." "It is neither," calmly replied the voice of the Sphere, "it is Knowledge; it is Three Dimensions: open your eye once again and try to look steadily."

I looked, and, behold, a new world! There stood before me, visibly incorporate, all that I had before inferred, conjectured, dreamed, of perfect Circular beauty. What seemed the centre of the Stranger's form lay open to my view: yet I could see no heart, lungs, nor arteries, only a beautiful harmonious Something—for which I had no words; but you, my Readers in Spaceland, would call it the surface of the Sphere.

Prostrating myself mentally before my Guide, I cried, "How is it, O divine ideal of consummate loveliness and wisdom that I see thy inside, and yet cannot discern thy heart, thy lungs, thy arteries, thy liver?" "What you think you see, you see not," he replied; "it is not giving to you, nor to any other Being, to behold my internal parts. I am of a different order of Beings from those in Flatland. Were I a Circle, you could discern my intestines, but I am a Being, composed as I told you before, of many Circles, the Many in the One, called in this country a Sphere. And, just as the outside of a Cube is a Square, so the outside of a Sphere represents the appearance of a Circle."

Bewildered though I was by my Teacher's enigmatic utterance, I no longer chafed against it, but worshipped him in silent adoration. He continued, with more mildness in his voice. "Distress not yourself if you cannot at first understand the deeper mysteries of Spaceland. By degrees they will dawn upon you. Let us begin by casting back a glance at the region whence you came. Return with me a while to the plains of Flatland and I will shew you that which you have often reasoned and thought about, but never seen with the sense of sight—a visible angle."

"Impossible!" I cried; but, the Sphere leading the way, I followed as if in a dream, till once more his voice arrested me: "Look yonder, and behold your own Pentagonal house, and all its inmates."

I looked below, and saw with my physical eye all that domestic individuality which I had hitherto merely inferred with the understanding. And how poor and shadowy was the inferred conjecture in comparison with the reality which I now behold! My four Sons calmly asleep in the North-Western rooms, my two orphan Grandsons to the South; the Servants, the Butler, my Daughter, all in their several apartments. Only my affectionate Wife, alarmed by my continued absence, had quitted her room and was roving up and down in the Hall, anxiously awaiting my return. Also the Page, aroused by my cries, had left his room, and under pretext of ascertaining whether I had fallen somewhere in a faint, was prying into the cabinet in my study. All this I could now SEE, not merely infer; and as we came nearer and nearer, I could discern even the contents of my cabinet, and the two chests of gold, and the tablets of which the Sphere had made mention.

Touched by my Wife's distress, I would have sprung downward to reassure her, but I found myself incapable of motion. "Trouble not yourself about your Wife," said my Guide: "she will not be long left in anxiety; meantime, let us take a survey of Flatland."

Once more I felt myself rising through space. It was even as the Sphere had said. The further we receded from the object we beheld, the larger became the field of vision. My native city, with the interior of every house and every creature therein, lay open to my view in miniature. We mounted higher, and lo, the secrets of the earth, the depths of the mines and inmost caverns of the hills, were bared before me.

Awestruck at the sight of the mysteries of the earth, thus unveiled before my unworthy eye, I said to my Companion, "Behold, I am become as a God. For the wise men in our country say that to see all things, or as they express it, OMNIVIDENCE, is the attribute of God alone." There was something of scorn in the voice of my Teacher as he made answer: "it is so indeed! Then the very pick-pockets and cut-throats of my country are to be worshipped by your wise men as being Gods: for there is not one of them that does not see as much as you see now. But trust me, your wise men are wrong."

I. Then is omnividence the attribute of others besides Gods?

Sphere. I do not know. But, if a pick-pocket or a cut-throat of our country can see everything that is in your country, surely that is no reason why the pick-pocket or cut-throat should be accepted by you as a God. This omnividence, as you call it—it is not a common word in Spaceland—does it make you more just, more merciful, less selfish, more loving? Not in the least. Then how does it make you more divine?

I. "More merciful, more loving!" But these are the qualities of women! And we know that a Circle is a higher Being than a Straight Line, in so far as knowledge and wisdom are more to be esteemed than mere affection.

Sphere. It is not for me to classify human faculties according to merit. Yet many of the best and wisest in Spaceland think more of the affections than of the understand, more of your despised Straight Lines than of your belauded Circles. But enough of this. Look yonder. Do you know that building?
I looked, and afar off I saw an immense Polygonal structure, in which I recognized the General Assembly Hall of the States of Flatland, surrounded by dense lines of Pentagonal buildings at right angles to each other, which I knew to be streets; and I perceived that I was approaching the great Metropolis.

"Here we descend," said my Guide. It was now morning, the first hour of the first day of the two thousandth year of our era. Acting, as was their wont, in strict accordance with precedent, the highest Circles of the realm were meeting in solemn conclave, as they had met on the first hour of the first day of the year 1000, and also on the first hour of the first day of the year 0.

The minutes of the previous meetings were now read by one whom I at once recognized as my brother, a perfectly Symmetrical Square, and the Chief Clerk of the High Council. It was found recorded on each occasion that: "Whereas the States had been troubled by divers ill-intentioned persons pretending to have received revelations from another World, and professing to produce demonstrations whereby they had instigated to frenzy both themselves and others, it had been for this cause unanimously resolved by the Grand Council that on the first day of each millenary, special injunctions be sent to the Prefects in the several districts of Flatland, to make strict search for such misguided persons, and without formality of mathematical examination, to destroy all such as were Isosceles of any degree, to scourge and imprison any regular Triangle, to cause any Square or Pentagon to be sent to the district Asylum, and to arrest any one of higher rank, sending him straightway to the Capital to be examined and judged by the Council."

"You hear your fate," said the Sphere to me, while the Council was passing for the third time the formal resolution. "Death or imprisonment awaits the Apostle of the Gospel of Three Dimensions." "Not so," replied I, "the matter is now so clear to me, the nature of real space so palpable, that methinks I could make a child understand it. Permit me but to descend at this moment and enlighten them." "Not yet," said my Guide, "the time will come for that. Meantime I must perform my mission. Stay thou there in thy place." Saying these words, he leaped with great dexterity into the sea (if I may so call it) of Flatland, right in the midst of the ring of Counsellors. "I come," said he, "to proclaim that there is a land of Three Dimensions."

I could see many of the younger Counsellors start back in manifest horror, as the Sphere's circular section widened before them. But on a sign from the presiding Circle—who shewed not the slightest alarm or surprise—six Isosceles of a low type from six different quarters rushed upon the Sphere. "We have him," they cried; "No; yes; we have him still! he's going! he's gone!"

"My Lords," said the President to the Junior Circles of the Council, "there is not the slightest need for surprise; the secret archives, to which I alone have access, tell me that a similar occurrence happened on the last two millennial commencements. You will, of course, say nothing of these trifles outside the Cabinet."

Raising his voice, he now summoned the guards. "Arrest the policemen; gag them. You know your duty." After he had consigned to their fate the wretched policemen—ill-fated and unwilling witnesses of a State-secret which they were not to be permitted to reveal—he again addressed the Counsellors. "My Lords, the business of the Council being concluded, I have only to wish you a happy New Year." Before departing, he expressed, at some length, to the Clerk, my excellent but most unfortunate brother, his sincere regret that, in accordance with precedent and for the sake of secrecy, he must condemn him to perpetual imprisonment, but added his satisfaction that, unless some mention were made by him of that day's incident, his life would be spared.

SECTION 19 How, though the Sphere shewed me other mysteries of Spaceland, I still desire more; and what came of it

When I saw my poor brother led away to imprisonment, I attempted to leap down into the Council Chamber, desiring to intercede on his behalf, or at least bid him farewell. But I found that I had no motion of my own. I absolutely depended on the volition of my Guide, who said in gloomy tones, "Heed not thy brother; haply thou shalt have ample time hereafter to console with him. Follow me."

Once more we ascended into space. "Hitherto," said the Sphere, "I have shewn you naught save Plane Figures and their interiors. Now I must introduce you to Solids, and reveal to you the plan upon which they are constructed. Behold this multitude of moveable square cards. See, I put one on another, not, as you supposed, Northward of the other, but ON the other. Now a second, now a third. See, I am building up a Solid by a multitude of Squares parallel to one another. Now the Solid is complete, being as high as it is long and broad, and we call it a Cube."

"Pardon me, my Lord," replied I; "but to my eye the appearance is as of an Irregular Figure whose inside is laid open to view; in other words, methinks I see no Solid, but a Plane such as we infer in Flatland; only of an Irregularity which betokens some monstrous criminal, so that the very sight of it is painful to my eyes."

"True," said the Sphere; "it appears to you a Plane, because you are not accustomed to light and shade and perspective; just as in Flatland a Hexagon would appear a Straight Line to one who has not the Art of Sight Recognition. But in reality it is a Solid, as you shall learn by the sense of Feeling."

He then introduced me to the Cube, and I found that this marvellous Being was indeed no Plane, but a Solid;
and that he was endowed with six plane sides and eight terminal points called solid angles; and I remembered the saying of the Sphere that just such a Creature as this would be formed by the Square moving, in Space, parallel to himself: and I rejoiced to think that so insignificant a Creature as I could in some sense be called the Progenitor of so illustrious an offspring.

But still I could not fully understand the meaning of what my Teacher had told me concerning "light" and "shade" and "perspective"; and I did not hesitate to put my difficulties before him.

Were I to give the Sphere's explanation of these matters, succinct and clear though it was, it would be tedious to an inhabitant of Space, who knows these things already. Suffice it, that by his lucid statements, and by changing the position of objects and lights, and by allowing me to feel the several objects and even his own sacred Person, he at last made all things clear to me, so that I could now readily distinguish between a Circle and a Sphere, a Plane Figure and a Solid.

This was the Climax, the Paradise, of my strange eventful History. Henceforth I have to relate the story of my miserable Fall:—most miserable, yet surely most undeserved! For why should the thirst for knowledge be aroused, only to be disappointed and punished? My volition shrinks from the painful task of recalling my humiliation; yet, like a second Prometheus, I will endure this and worse, if by any means I may arouse in the interiors of Plane and Solid Humanity a spirit of rebellion against the Conceit which would limit our Dimensions to Two or Three or any number short of Infinity. Away then with all personal considerations! Let me continue to the end, as I began, without further digressions or anticipations, pursuing the plain path of dispassionate History. The exact facts, the exact words,—and they are burnt in upon my brain,—shall be set down without alteration of an iota; and let my Readers judge between me and Destiny.

The Sphere would willingly have continued his lessons by indoctrinating me in the conformation of all regular Solids, Cylinders, Cones, Pentahedrons, Hexahedrons, Dodecahedrons, and Spheres: but I ventured to interrupt him. Not that I was wearied of knowledge. On the contrary, I thirsted for yet deeper and fuller draughts than he was offering to me.

"Pardon me," said I, "O Thou Whom I must no longer address as the Perfection of all Beauty; but let me beg thee to vouchsafe thy servant a sight of thine interior."

Sphere. My what?
I. Thine interior: thy stomach, thy intestines.

Sphere. Whence this ill-timed impertinent request? And what mean you by saying that I am no longer the Perfection of all Beauty?
I. My Lord, your own wisdom has taught me to aspire to One even more great, more beautiful, and more closely approximate to Perfection than yourself. As you yourself, superior to all Flatland forms, combine many Circles in One, so doubtless there is One above you who combines many Spheres in One Supreme Existence, surpassing even the Solids of Spaceland. And even as we, who are now in Space, look down on Flatland and see the insides of all things, so of a certainty there is yet above us some higher, purer region, whither thou dost surely purpose to lead me—O Thou Whom I shall always call, everywhere and in all Dimensions, my Priest, Philosopher, and Friend—some yet more spacious Space, some more dimensionable Dimensionality, from the vantage-ground of which we shall look down together upon the revealed insides of Solid things, and where thine own intestines, and those of thy kindred Spheres, will lie exposed to the view of the poor wandering exile from Flatland, to whom so much has already been vouchsafed.

Sphere. Pooh! Stuff! Enough of this trifling! The time is short, and much remains to be done before you are fit to proclaim the Gospel of Three Dimensions to your blind benighted countrymen in Flatland.
I. Nay, gracious Teacher, deny me not what I know it is in thy power to reform. Grant me but one glimpse of thine interior, and I am satisfied for ever, remaining henceforth thy docile pupil, thy unemancipable slave, ready to receive all thy teachings and to feed upon the words that fall from thy lips.

Sphere. Well, then, to content and silence you, let me say at once, I would shew you what you wish if I could; but I cannot. Would you have me turn my stomach inside out to oblige you?
I. But my Lord has shewn me the intestines of all my countrymen in the Land of Two Dimensions by taking me with him into the Land of Three. What therefore more easy than now to take his servant on a second journey into the blessed region of the Fourth Dimension, where I shall look down with him once more upon this land of Three Dimensions, and see the inside of every three-dimensioned house, the secrets of the solid earth, the treasures of the mines of Spaceland, and the intestines of every solid living creature, even the noble and adorable Spheres.

Sphere. But where is this land of Four Dimensions?
I. I know not: but doubtless my Teacher knows.

Sphere. Not I. There is no such land. The very idea of it is utterly inconceivable.
I. Not inconceivable, my Lord, to me, and therefore still less inconceivable to my Master. Nay, I despair not
that, even here, in this region of Three Dimensions, your Lordship's art may make the Fourth Dimension visible to me; just as in the Land of Two Dimensions my Teacher's skill would fain have opened the eyes of his blind servant to the invisible presence of a Third Dimension, though I saw it not.

Let me recall the past. Was I not taught below that when I saw a Line and inferred a Plane, I in reality saw a Third unrecognized Dimension, not the same as brightness, called "height"? And does it not now follow that, in this region, when I see a Plane and infer a Solid, I really see a Fourth unrecognized Dimension, not the same as colour, but existent, though infinitesimal and incapable of measurement?

And besides this, there is the Argument from Analogy of Figures.

Sphere. Analogy! Nonsense: what analogy?

I. Your Lordship tempts his servant to see whether he remembers the revelations imparted to him. Trifle not with me, my Lord; I crave, I thirst, for more knowledge. Doubtless we cannot SEE that other higher Spaceland now, because we have no eye in our stomachs. But, just as there WAS the realm of Flatland, though that poor puny Lineland Monarch could neither turn to left nor right to discern it, and just as there WAS close at hand, and touching my frame, the land of Three Dimensions, though I, blind senseless wretch, had no power to touch it, no eye in my interior to discern it, so of a surety there is a Fourth Dimension, which my Lord perceives with the inner eye of thought. And that it must exist my Lord himself has taught me. Or can he have forgotten what he himself imparted to his servant?

In One Dimension, did not a moving Point produce a Line with TWO terminal points?
In Two Dimensions, did not a moving Line produce a Square with FOUR terminal points?
In Three Dimensions, did not a moving Square produce—did not this eye of mine behold it—that blessed Being, a Cube, with EIGHT terminal points?
And in Four Dimensions shall not a moving Cube—alas, for Analogy, and alas for the Progress of Truth, if it be not so—shall not, I say, the motion of a divine Cube result in a still more divine Organization with SIXTEEN terminal points?

Behold the infallible confirmation of the Series, 2, 4, 8, 16: is not this a Geometrical Progression? Is not this—if I might quote my Lord's own words—"strictly according to Analogy"?

Again, was I not taught by my Lord that as in a Line there are TWO bounding Points, and in a Square there are FOUR bounding Lines, so in a Cube there must be SIX bounding Squares? Behold once more the confirming Series, 2, 4, 6: is not this an Arithmetical Progression? And consequently does it not of necessity follow that the more divine offspring of the divine Cube in the Land of Four Dimensions, must have 8 bounding Cubes: and is not this also, as my Lord has taught me to believe, "strictly according to Analogy"? O, my Lord, my Lord, behold, I cast myself in faith upon conjecture, not knowing the facts; and I appeal to your Lordship to confirm or deny my logical anticipations. If I am wrong, I yield, and will no longer demand a Fourth Dimension; but, if I am right, my Lord will listen to reason.

I ask therefore, is it, or is it not, the fact, that ere now your countrymen also have witnessed the descent of Beings of a higher order than their own, entering closed rooms, even as your Lordship entered mine, without the opening of doors or windows, and appearing and vanishing at will? On the reply to this question I am ready to stake everything. Deny it, and I am henceforth silent. Only vouchsafe an answer.

Sphere (AFTER A PAUSE). It is reported so. But men are divided in opinion as to the facts. And even granting the facts, they explain them in different ways. And in any case, however great may be the number of different explanations, no one has adopted or suggested the theory of a Fourth Dimension. Therefore, pray have done with this trifling, and let us return to business.

I. I was certain of it. I was certain that my anticipations would be fulfilled. And now have patience with me and answer me yet one more question, best of Teachers! Those who have thus appeared—no one knows whence—and have returned—no one knows whither—have they also contracted their sections and vanished somehow into that more Spacious Space, whither I now entreat you to conduct me?

Sphere (MOODILY). They have vanished, certainly—if they ever appeared. But most people say that these visions arose from the thought—you will not understand me—from the brain; from the perturbed angularity of the Seer.

I. Say they so? Oh, believe them not. Or if it indeed be so, that this other Space is really Thoughtland, then take me to that blessed Region where I in Thought shall see the insides of all solid things. There, before my ravished eye, a Cube moving in some altogether new direction, but strictly according to Analogy, so as to make every particle of his interior pass through a new kind of Space, with a wake of its own—shall create a still more perfect perfection than himself, with sixteen terminal Extra-solid angles, and Eight solid Cubes for his Perimeter. And once there, shall we stay our upward course? In that blessed region of Four Dimensions, shall we linger at the threshold of the Fifth, and not enter therein? Ah, no! Let us rather resolve that our ambition shall soar with our corporal ascent. Then,
yielding to our intellectual onset, the gates of the Six Dimension shall fly open; after that a Seventh, and then an
Eighth—

How long I should have continued I know not. In vain did the Sphere, in his voice of thunder, reiterate his
command of silence, and threaten me with the direst penalties if I persisted. Nothing could stem the flood of my
ecstatic aspirations. Perhaps I was to blame; but indeed I was intoxicated with the recent draughts of Truth to which
he himself had introduced me. However, the end was not long in coming. My words were cut short by a crash
outside, and a simultaneous crash inside me, which impelled me through space with a velocity that precluded
speech. Down! down! down! I was rapidly descending; and I knew that return to Flatland was my doom. One
glimpse, one last and never-to-be-forgotten glimpse I had of that dull level wilderness—which was now to become
my Universe again—spread out before my eye. Then a darkness. Then a final, all-consummating thunder-peal; and,
when I came to myself, I was once more a common creeping Square, in my Study at home, listening to the Peace-
Cry of my approaching Wife.

SECTION 20 How the Sphere encouraged me in a Vision.

Although I had less than a minute for reflection, I felt, by a kind of instinct, that I must conceal my experiences
from my Wife. Not that I apprehended, at the moment, any danger from her divulging my secret, but I knew that to
any Woman in Flatland the narrative of my adventures must needs be unintelligible. So I endeavoured to reassure
her by some story, invented for the occasion, that I had accidentally fallen through the trap-door of the cellar, and
had there lain stunned.

The Southward attraction in our country is so slight that even to a Woman my tale necessarily appeared
extraordinary and well-nigh incredible; but my Wife, whose good sense far exceeds that of the average of her Sex,
and who perceived that I was unusually excited, did not argue with me on the subject, but insisted that I was ill and
required repose. I was glad of an excuse for retiring to my chamber to think quietly over what had happened. When I
was at last by myself, a drowsy sensation fell on me; but before my eyes closed I endeavoured to reproduce the
Third Dimension, and especially the process by which a Cube is constructed through the motion of a Square. It was
not so clear as I could have wished; but I remembered that it must be "Upward, and yet not Northward," and I
determined steadfastly to retain these words as the clue which, if firmly grasped, could not fail to guide me to the
solution. So mechanically repeating, like a charm, the words, "Upward, yet not Northward," I fell into a sound
refreshing sleep.

During my slumber I had a dream. I thought I was once more by the side of the Sphere, whose lustrous hue
betokened that he had exchanged his wrath against me for perfectly placability. We were moving together towards a
bright but infinitesimally small Point, to which my Master directed my attention. As we approached, methought
there issued from it a slight humming noise as from one of your Spaceland bluebottles, only less resonant by far, so
slight indeed that even in the perfect stillness of the Vacuum through which we soared, the sound reached not our
ears till we checked our flight at a distance from it of something under twenty human diagonals.

"Look yonder," said my Guide, "in Flatland thou hast lived; of Lineland thou hast received a vision; thou hast
soared with me to the heights of Spaceland; now, in order to complete the range of thy experience, I conduct thee
downward to the lowest depth of existence, even to the realm of Pointland, the Abyss of No dimensions.

"Behold yon miserable creature. That Point is a Being like ourselves, but confined to the non-dimensional Gulf.
He is himself his own World, his own Universe; of any other than himself he can form no conception; he knows not
Length, nor Breadth, nor Height, for he has had no experience of them; he has no cognizance even of the number
Two; nor has he a thought of Plurality; for he is himself his One and All, being really Nothing. Yet mark his perfect
self-contentment, and hence learn his lesson, that to be self-contented is to be vile and ignorant, and that to aspire is
better than to be blindly and impotently happy. Now listen."

He ceased; and there arose from the little buzzing creature a tiny, low, monotonous, but distinct tinkling, as
from one of your Spaceland phonographs, from which I caught these words, "Infinite beatitude of existence! It is;
and there is nothing else beside It."

"What," said I, "does the puny creature mean by 'it'?" "He means himself," said the Sphere: "have you not
noticed before now, that babies and babyish people who cannot distinguish themselves from the world, speak of
themselves in the Third Person? But hush!"

"It fills all Space," continued the little soliloquizing Creature, "and what It fills, It is. What It thinks, that It
utters; and what It utters, that It hears; and It itself is Thinker, Utterer, Hearer, Thought, Word, Audition; it is the
One, and yet the All in All. Ah, the happiness, ah, the happiness of Being!"

"Can you not startle the little thing out of its complacency?" said I. "Tell it what it really is, as you told me;
reveal to it the narrow limitations of Pointland, and lead it up to something higher." "That is no easy task," said my
Master; "try you."

Hereon, raising by voice to the uttermost, I addressed the Point as follows:
"Silence, silence, contemptible Creature. You call yourself the All in All, but you are the Nothing: your so-called Universe is a mere speck in a Line, and a Line is a mere shadow as compared with—" "Hush, hush, you have said enough," interrupted the Sphere, "now listen, and mark the effect of your harangue on the King of Pointland."

The lustre of the Monarch, who beam'd more brightly than ever upon hearing my words, shew'd clearly that he retained his complacency; and I had hardly ceased when he took up his strain again. "Ah, the joy, ah, the joy of Thought! What can It not achieve by thinking! Its own Thought coming to Itsel, suggestive of its disparagement, thereby to enhance Its happiness! Sweet rebellion stirred up to result in triumph! Ah, the divine creative power of the All in One! Ah, the joy, the joy of Being!"

"You see," said my Teacher, "how little your words have done. So far as the Monarch understand them at all, he accepts them as his own—for he cannot conceive of any other except himself—and plumes himself upon the variety of Its Thought as an instance of creative Power. Let us leave this God of Pointland to the ignorant fruition of his omnipresence and omniscience: nothing that you or I can do can rescue him from his self-satisfaction."

After this, as we floated gently back to Flatland, I could hear the mild voice of my Companion pointing the moral of my vision, and stimulating me to aspire, and to teach others to aspire. He had been angered at first—he confessed—by my ambition to soar to Dimensions above the Third; but, since then, he had received fresh insight, and he was not too proud to acknowledge his error to a Pupil. Then he proceeded to initiate me into mysteries yet higher than those I had witnessed, shewing me how to construct Extra-Solids by the motion of Solids, and Double Extra-Solids by the motion of Extra-Solids, and all "strictly according to Analogy," all by methods so simple, so easy, as to be patent even to the Female Sex.

SECTION 21 How I tried to teach the Theory of Three Dimensions to my Grandson, and with what success

I awoke rejoicing, and began to reflect on the glorious career before me. I would go forth, methought, at once, and evangelize the whole of Flatland. Even to Women and Soldiers should the Gospel of Three Dimensions be proclaimed. I would begin with my Wife.

Just as I had decided on the plan of my operations, I heard the sound of many voices in the street commanding silence. Then followed a louder voice. It was a herald's proclamation. Listening attentively, I recognized the words of the Resolution of the Council, enjoining the arrest, imprisonment, or execution of any one who should pervert the minds of people by delusions, and by professing to have received revelations from another World.

I reflected. This danger was not to be trifled with. It would be better to avoid it by omitting all mention of my Revelation, and by proceeding on the path of Demonstration—which after all, seemed so simple and so conclusive that nothing would be lost by discarding the former means. "Upward, not Northward"—was the clue to the whole proof. It had seemed to me fairly clear before I fell asleep; and when I first awoke, fresh from my dream, it had appeared as patent as Arithmetic; but somehow it did not seem to me quite so obvious now. Though my Wife entered the room opportunely at just that moment, I decided, after we had exchanged a few words of commonplace conversation, not to begin with her.

My Pentagonal Sons were men of character and standing, and physicians of no mean reputation, but not great in mathematics, and, in that respect, unfit for my purpose. But it occurred to me that a young and docile Hexagon, with a mathematical turn, would be a most suitable pupil. Why therefore not make my first experiment with my little precocious Grandson, whose casual remarks on the meaning of three-to-the-third had met with the approval of the Sphere? Discussing the matter with him, a mere boy, I should be in perfect safety; for he would know nothing of the Proclamation of the Council; whereas I could not feel sure that my Sons—so greatly did their patriotism and reverence for the Circles predominate over mere blind affection—might not feel compelled to hand me over to the Prefect, if they found me seriously maintaining the seditious heresy of the Third Dimension.

But the first thing to be done was to satisfy in some way the curiosity of my Wife, who naturally wished to know something of the reasons for which the Circle had desired that mysterious interview, and of the means by which he had entered the house. Without entering into the details of the elaborate account I gave her,—an account, I fear, not quite so consistent with truth as my Readers in Spaceland might desire,—I must be content with saying that I succeeded at last in persuading her to return quietly to her household duties without eliciting from me any reference to the World of Three Dimensions. This done, I immediately sent for my Grandson; for, to confess the truth, I felt that all that I had seen and heard was in some strange way slipping away from me, like the image of a half-grasped, tantalizing dream, and I longed to essay my skill in making a first disciple.

When my Grandson entered the room I carefully secured the door. Then, sitting down by his side and taking our mathematical tablets,—or, as you would call them, Lines—I told him we would resume the lesson of yesterday. I taught him once more how a Point by motion in One Dimension produces a Line, and how a straight Line in Two Dimensions produces a Square. After this, forcing a laugh, I said, "And now, you scamp, you wanted to make believe that a Square may in the same way by motion 'Upward, not Northward' produce another figure, a sort of
extra square in Three Dimensions. Say that again, you young rascal."

At this moment we heard once more the herald's "O yes! O yes!" outside in the street proclaiming the Resolution of the Council. Young though he was, my Grandson—who was unusually intelligent for his age, and bred up in perfect reverence for the authority of the Circles—took in the situation with an acuteness for which I was quite unprepared. He remained silent till the last words of the Proclamation had died away, and then, bursting into tears, "Dear Grandpapa," he said, "that was only my fun, and of course I meant nothing at all by it; and we did not know anything then about the new Law; and I don't think I said anything about the Third Dimension; and I am sure I did not say one word about 'Upward, not Northward,' for that would be such nonsense, you know. How could a thing move Upward, and not Northward? Upward and not Northward! Even if I were a baby, I could not be so absurd as that. How silly it is! Ha! ha! ha!"

"Not at all silly," said I, losing my temper; "here for example, I take this Square," and, at the word, I grasped a moveable Square, which was lying at hand—"and I move it, you see, not Northward but—yes, I move it Upward—that is to say, Northward but I move it somewhere—not exactly like this, but somehow—" Here I brought my sentence to an inane conclusion, shaking the Square about in a purposeless manner, much to the amusement of my Grandson, who burst out laughing louder than ever, and declared that I was not teaching him, but joking with him; and so saying he unlocked the door and ran out of the room. Thus ended my first attempt to convert a pupil to the Gospel of Three Dimensions.

SECTION 22 How I then tried to diffuse the Theory of Three Dimensions by other means, and of the result

My failure with my Grandson did not encourage me to communicate my secret to others of my household; yet neither was I led by it to despair of success. Only I saw that I must not wholly rely on the catch-phrase, "Upward, not Northward," but must rather endeavour to seek a demonstration by setting before the public a clear view of the whole subject; and for this purpose it seemed necessary to resort to writing.

So I devoted several months in privacy to the composition of a treatise on the mysteries of Three Dimensions. Only, with the view of evading the Law, if possible, I spoke not of a physical Dimension, but of a Thoughtland whence, in theory, a Figure could look down upon Flatland and see simultaneously the insides of all things, and where it was possible that there might be supposed to exist a Figure environed, as it were, with six Squares, and containing eight terminal Points. But in writing this book I found myself sadly hampered by the impossibility of drawing such diagrams as were necessary for my purpose: for of course, in our country of Flatland, there are no tablets but Lines, and no diagrams but Lines, all in one straight Line and only distinguishable by difference of size and brightness; so that, when I had finished my treatise (which I entitled, "Through Flatland to Thoughtland") I could not feel certain that many would understand my meaning.

Meanwhile my wife was under a cloud. All pleasures palled upon me; all sights tantalized and tempted me to outspoken treason, because I could not compare what I saw in Two Dimensions with what it really was if seen in Three, and could hardly refrain from making my comparisons aloud. I neglected my clients and my own business to give myself to the contemplation of the mysteries which I had once beheld, yet which I could impart to no one, and found daily more difficult to reproduce even before my own mental vision. One day, about eleven months after my return from Spaceland, I tried to see a Cube with my eye closed, but failed; and though I succeeded afterwards, I was not then quite certain (nor have I been ever afterwards) that I had exactly realized the original. This made me more melancholy than before, and determined me to take some step; yet what, I knew not. I felt that I would have been willing to sacrifice my life for the Cause, if thereby I could have produced conviction. But if I could not convince my Grandson, how could I convince the highest and most developed Circles in the land?

And yet at times my spirit was too strong for me, and I gave vent to dangerous utterances. Already I was considered heterodox if not treasonable, and I was keenly alive to the danger of my position; nevertheless I could not at times refrain from bursting out into suspicious or half-seditious utterances, even among the highest Polygonal or Circular society. When, for example, the question arose about the treatment of those lunatics who said that they had received the power of seeing the insides of things, I would quote the saying of an ancient Circle, who declared that prophets and inspired people are always considered by the majority to be mad; and I could not help occasionally that my Grandson, who burst out laughing louder than ever, and declared that I was not teaching him, but joking with him; and so saying he unlocked the door and ran out of the room. Thus ended my first attempt to convert a pupil to the Gospel of Three Dimensions.
exhorted all my hearers to divest themselves of prejudice and to become believers in the Third Dimension.

Need I say that I was at once arrested and taken before the Council?

Next morning, standing in the very place where but a very few months ago the Sphere had stood in my company, I was allowed to begin and to continue my narration unquestioned and uninterrupted. But from the first I foresaw my fate; for the President, noting that a guard of the better sort of Policemen was in attendance, of angularity little, if at all, under 55 degrees, ordered them to be relieved before I began my defence, by an inferior class of 2 or 3 degrees. I knew only too well what that meant. I was to be executed or imprisoned, and my story was to be kept secret from the world by the simultaneous destruction of the officials who had heard it; and, this being the case, the President desired to substitute the cheaper for the more expensive victims.

After I had concluded my defence, the President, perhaps perceiving that some of the junior Circles had been moved by evident earnestness, asked me two questions:—

1. Whether I could indicate the direction which I meant when I used the words "Upward, not Northward"?
2. Whether I could by any diagrams or descriptions (other than the enumeration of imaginary sides and angles) indicate the Figure I was pleased to call a Cube?

I declared that I could say nothing more, and that I must commit myself to the Truth, whose cause would surely prevail in the end.

The President replied that he quite concurred in my sentiment, and that I could not do better. I must be sentenced to perpetual imprisonment; but if the Truth intended that I should emerge from prison and evangelize the world, the Truth might be trusted to bring that result to pass. Meanwhile I should be subjected to no discomfort that was not necessary to preclude escape, and, unless I forfeited the privilege by misconduct, I should be occasionally permitted to see my brother who had preceded me to my prison.

Seven years have elapsed and I am still a prisoner, and—if I except the occasional visits of my brother—debarred from all companionship save that of my jailers. My brother is one of the best of Squares, just sensible, cheerful, and not without fraternal affection; yet I confess that my weekly interviews, at least in one respect, cause me the bitterest pain. He was present when the Sphere manifested himself in the Council Chamber; he saw the Sphere's changing sections; he heard the explanation of the phenomena then give to the Circles. Since that time, scarcely a week has passed during seven whole years, without his hearing from me a repetition of the part I played in that manifestation, together with ample descriptions of all the phenomena in Spaceland, and the arguments for the existence of Solid things derivable from Analogy. Yet—I take shame to be forced to confess it—my brother has not yet grasped the nature of Three Dimensions, and frankly avows his disbelief in the existence of a Sphere.

Hence I am absolutely destitute of converts, and, for aught that I can see, the millennial Revelation has been made to me for nothing. Prometheus up in Spaceland was bound for bringing down fire for mortals, but I—poor Flatland Prometheus—lie here in prison for bringing down nothing to my countrymen. Yet I existing the hope that these memoirs, in some manner, I know not how, may find their way to the minds of humanity in Some Dimension, and may stir up a race of rebels who shall refuse to be confined to limited Dimensionality.

That is the hope of my brighter moments. Alas, it is not always so. Heavily weights on me at times the burdensome reflection that I cannot honestly say I am confident as to the exact shape of the once-seen, oft-regretted Cube; and in my nightly visions the mysterious precept, "Upward, not Northward," haunts me like a soul-devouring Sphinx. It is part of the martyrdom which I endure for the cause of Truth that there are seasons of mental weakness, when Cubes and Spheres flit away into the background of scarce-possible existences; when the Land of Three Dimensions seems almost as visionary as the Land of One or None; nay, when even this hard wall that bars me from my freedom, these very tablets on which I am writing, and all the substantial realities of Flatland itself, appear no better than the offspring of a diseased imagination, or the baseless fabric of a dream.

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PREFACE TO THE SECOND AND REVISED EDITION, 1884. BY THE EDITOR

If my poor Flatland friend retained the vigour of mind which he enjoyed when he began to compose these Memoirs, I should not now need to represent him in this preface, in which he desires, fully, to return his thanks to his readers and critics in Spaceland, whose appreciation has, with unexpected celerity, required a second edition of this work; secondly, to apologize for certain errors and misprints (for which, however, he is not entirely responsible); and, thirdly, to explain on or two misconceptions. But he is not the Square he once was. Years of imprisonment, and the still heavier burden of general incredulity and mockery, have combined with the thoughts and notions, and much also of the terminology, which he acquired during his short stay in spaceland. He has, therefore, requested me to reply in his behalf to two special objections, one of an intellectual, the other of a moral nature.

The first objection is, that a Flatlander, seeing a Line, sees something that must be THICK to the eye as well as LONG to the eye (otherwise it would not be visible, if it had not some thickness); and consequently he ought (it is argued) to acknowledge that his countrymen are not only long and broad, but also (though doubtless to a very slight
degree) THICK or HIGH. This objection is plausible, and, to Spacelanders, almost irresistible, so that, I confess, when I first heard it, I knew not what to reply. But my poor old friend's answer appears to me completely to meet it.

"I admit," said he—when I mentioned to him this objection—"I admit the truth of your critic's facts, but I deny his conclusions. It is true that we have really in Flatland a Third unrecognized Dimension called 'height,' just as it also is true that you have really in Spaceland a Fourth unrecognized Dimension, called by no name at present, but which I will call 'extra-height.' But we can no more take cognizance of our 'height' than you can of your 'extra-height.' Even I—who have been in Spaceland, and have had the privilege of understanding for twenty-four hours the meaning of 'height'—even I cannot now comprehend it, nor realize it by the sense of sight or by any process of reason; I can but apprehend it by faith.

"The reason is obvious. Dimension implies direction, implies measurement, implies the more and the less. Now, all our lines are EQUALLY and INFINITESIMALLY thick (or high, whichever you like); consequently, there is nothing in them to lead our minds to the conception of that Dimension. No 'delicate micrometer'—as has been suggested by one too hasty Spaceland critic—would in the least avail us; for we should not know WHAT TO MEASURE, NOR IN WHAT DIRECTION. When we see a Line, we see something that is long and BRIGHT; BRIGHTNESS, as well as length, is necessary to the existence of a Line; if the brightness vanishes, the Line is extinguished. Hence, all my Flatland friends—when I talk to them about the unrecognized Dimension which is somehow visible in a Line—say, 'Ah, you mean BRIGHTNESS': and when I reply, 'No, I mean a real Dimension,' they at once retort, 'Then measure it, or tell us in what direction it extends'; and this silences me, for I can do neither. Only yesterday, when the Chief Circle (in other words our High Priest) came to inspect the State Prison and paid me his seventh annual visit, and when for the seventh time he put me the question, 'Was I any better?' I tried to prove to him that he was 'high,' as well as long and broad, although he did not know it. But what was his reply? 'You say I am "high"; measure my "high-ness" and I will believe you.' What could I do? How could I meet his challenge? I was crushed; and he left the room triumphant.

"Does this still seem strange to you? Then put yourself in a similar position. Suppose a person of the Fourth Dimension, condescending to visit you, were to say, 'Whenever you open your eyes, you see a Plane (which is of Two Dimensions) and you INFER a Solid (which is of Three); but in reality you also see (though you do not recognize) a Fourth Dimension, which is not colour nor brightness nor anything of the kind, but a true Dimension, although I cannot point out to you its direction, nor can you possibly measure it.' What would you say to such a visitor? Would not you have him locked up? Well, that is my fate: and it is as natural for us Flatlanders to lock up a Square for preaching the Third Dimension, as it is for you Spacelanders to lock up a Cube for preaching the Fourth. Alas, how strong a family likeness runs through blind and persecuting humanity in all Dimensions! Points, Lines, Squares, Cubes, Extra-Cubes—we are all liable to the same errors, all alike the Slaves of our respective Dimensional prejudices, as one of our Spaceland poets has said—

"One touch of Nature makes all worlds akin." (footnote 1)

On this point the defence of the Square seems to me to be impregnable. I wish I could say that his answer to the second (or moral) objection was equally clear and cogent. It has been objected that he is a woman-hater; and as this objection has been vehemently urged by those whom Nature's decree has constituted the somewhat larger half of the Spaceland race, I should like to remove it, so far as I can honestly do so. But the Square is so unaccustomed to the use of the moral terminology of Spaceland that I should be doing him an injustice if I were literally to transcribe his defence against this charge. Acting, therefore, as his interpreter and summarizer, I gather that in the course of an imprisonment of seven years he has himself modified his own personal views, both as regards Women and as regards the Isosceles or Lower Classes. Personally, he now inclines to the opinion of the Sphere (see page 86) that the Straight Lines are in many important respects superior to the Circles. But, writing as a Historian, he has identified himself (perhaps too closely) with the views generally adopted by Flatland, and (as he has been informed) even by Spaceland, Historians; in whose pages (until very recent times) the destinies of Women and of the masses of mankind have seldom been deemed worthy of mention and never of careful consideration.

In a still more obscure passage he now desires to disavow the Circular or aristocratic tendencies with which some critics have naturally credited him. While doing justice to the intellectual power with which a few Circles have for many generations maintained their supremacy over immense multitudes of their countrymen, he believes that the facts of Flatland, speaking for themselves without comment on his part, declare that Revolutions cannot always be suppressed by slaughter, and that Nature, in sentencing the Circles to infecundity, has condemned them to ultimate failure—"and herein," he says, "I see a fulfilment of the great Law of all worlds, that while the wisdom of Man thinks it is working one thing, the wisdom of Nature constrains it to work another, and quite a different and far better thing." For the rest, he begs his readers not to suppose that every minute detail in the daily life of Flatland must needs correspond to some other detail in Spaceland; and yet he hopes that, taken as a whole, his work may prove suggestive as well as amusing, to those Spacelanders of moderate and modest minds who—speaking of that which is
of the highest importance, but lies beyond experience—decline to say on the one hand, "This can never be," and on the other hand, "It must needs be precisely thus, and we know all about it."

Footnote 1. The Author desires me to add, that the misconceptions of some of his critics on this matter has induced him to insert (on pp. 74 and 92) in his dialogue with the Sphere, certain remarks which have a bearing on the point in question and which he had previously omitted as being tedious and unnecessary.
The beetle woke from a dreamless sleep, yawned, stretched cramped limbs and smiled to himself. In the west the sunset's last glow faded. Stars sprang out in the clear desert sky, dimmed only by the white moon that rose full and brilliant above the eastern horizon.

Methodically, suppressing impatience, he went through every evening's ritual of waking. He checked his instruments, scanned the mirrors which gave him a broad view of moonlit desert to his left. To the right he could see nothing, for his little armored machine lay half-buried, burrowed deep into the sheltering flank of a great dune; all day long it had escaped the notice of prowling diurnal machines of prey. He listened, too, for any sound of danger which his amplifiers might pick up from near or far.

The motor, idling as it had all day while its master slept, responded to testing with a smooth, almost noiseless surge of power. The instruments were in order; there was plenty of water in the condenser, and though his food supply was low that shouldn't matter--before tonight was done he would be once more among his people.

Only the fuel gauge brought an impatient frown to his face. It was menacingly near the empty mark--which meant he would have to spend time foraging before he could continue his journey. Well ... no help for it. He opened the throttle.

The beetle's name was Dworn, and he was twenty-one years old. The flesh and blood of him, that is. The rest, the steel-armored shell, the wheels and engine and hydraulic power-system, the electric sensory equipment--all of which was to his mind as much part of his identity as his own skin, muscles, eyes and ears--was only five years old.

Dworn's face, under his sleep-tousled thatch of blond hair, was boyish. But there were hard lines of decision there, which the last months had left.... Tonight by the reckoning of his people, he was still a youth; but when tomorrow dawned, the testing of his wanderyear would be behind him, and he would be adult, a warrior of the beetle horde.

Sand spilled from the beetle's dull-black carapace as it surged from its hiding-place. It drifted, its motor only a murmur, along the shoulder of the dune. Dworn eyed his offending fuel gauge darkly; he would very much have liked to be on his way at top speed, toward the year's-end rendezvous of the horde under the shadow of the Barrier.

He began cruising slowly, at random, across the rolling moonlit waste of wind-built dunes, watching for spoor. He spied, and swerved automatically to avoid, the cunningly concealed pit of a sand devil, strategically placed in a hollow of the ground. Cautiously Dworn circled back for a second look. The conical pit was partly fallen in, unrepaired; the devil was obviously gone.

The burrowing machine would, Dworn knew, have had fuel and other supplies somewhere in its deep lair, buried beneath the drifted sand where it spent its life breathing through a tube to the surface and waiting for unwary passers-by to skid into its trap. But Dworn regretfully concluded that it would not be worth while digging on the chance that whatever had done away with the devil had not rifled its stores.... He swung the beetle's nose about and accelerated again.

On the next rise, he paused to inspect the track of a pill-bug; but to his practiced eye it was quickly evident that the trail was too old, blowing sand had already blurred the mark of heels, and the bug probably was many miles away by now.

A mile farther on, luck smiled on him at last. He crossed the fresh and well-marked trail of a caterpillar--deeply indented tread-marks, meandering across the dunes.

He began following the spoor, still slowly, so as not to lose it or to run upon its maker unawares. A caterpillar was a lumbering monster of which he had no fear, but it was much bigger than a beetle, and could be dangerous when cornered. Dworn had no wish to corner it; the caterpillar itself was not the object of his stalking, but one of its supply caches which according to caterpillar custom it would have hidden at various places within its range.

The trail led him uphill, into a region cut by washes--dry now, since the rainy season was past--and by ridges that rose like naked vertebrae from the sea of sand that engulfed the valley floor.

Several times Dworn saw places where the caterpillar had halted, backed and filled, shoved piles of earth and rocks together or scraped patches of ground clear with its great shovel. But the beetle knew his prey's habits of old, and he passed by these spots without a second glance, aware that this conspicuous activity was no more than a ruse to deceive predators like himself. If Dworn hadn't known that trick, and many others used by the various non-predatory machine species which manufactured food and fuel by photosynthesis, he would have been unfit to be a
beetle—and he would never have lived through the wanderyear which weeded out the unfit according to the beetle people's stern immemorial custom.

At last he came to a stop on a rocky hillside, where the tracks were faint and indistinct. Carefully scanning the ground downslope, he saw that his instinct had not misled him—the caterpillar had turned aside at this place and had afterward returned to its original trail, backing and dragging its digging-blade to obliterate the traces of its side excursion.

Dworn grinned, feeling the stirring of the hunter's excitement that never failed to move him, even on such a prosaic foraging expedition as this. He sent the beetle bumping down the slope.

The blurred trail led into the sandy bed of a wash at the foot of the hill, and along that easily-traveled way for a quarter mile. Then the stream made a sharp bend, undercutting a promontory on the left and creating a high bank of earth and soft white rock. Dworn saw that a section of the bank had collapsed and slid into the gully. That was no accident; the mark where a great blade had sheared into the overhang was plain to read, even if it had not been for the scuffed over vestiges of caterpillar tracks round about.

Dworn halted and listened intently, his amplifier turned all the way up. No sound broke the stillness, and the black moon-shadows within range of his vision did not stir.

He nosed the beetle carefully up to the heap. He had no equipment for moving those tons of soil and rock, but that was no matter. He twisted a knob on the control panel, a shutter in the beetle's forward cowling snapped open and a telescoping drill thrust from its housing, chattered briefly and took hold, while the engine's pulse strengthened to take up the load.

 Twice Dworn abandoned fruitless borings and tried a different spot. On the third try, at almost full extension the drill-point screeched suddenly on metal and then as suddenly met no more resistance. Dworn switched on the pump, and quickly turned it off again; he swung the overhead hatch open, and--pausing to listen warily once more--clambered out onto the cowling, in the cold night air, to open the sample tap at the base of the drill and sniff the colorless fluid that trickled from it.

It gave off the potent odor of good fuel, and Dworn nodded to himself, not regretting his caution though in this case it had not been needed. But--clever caterpillars had been known to bury canisters of water in their caches, poison for the unsuspecting.

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The pump throbbed again; there was the satisfying gurgle of fuel flowing into almost-empty tanks. Dworn leaned back, seizing the opportunity to relax for a moment in preparation for the strenuous journey still before him.

But he didn't fail to snap alert when just as the gauge trembled near the full mark, he heard pebbles rattling on the hillside above. Immediately thereupon he became aware of the grind of steel on stone and the rumbling of an imperfectly muffled engine.

In one smooth rapid motion Dworn switched off the pump, and spun the drill control. As the mechanism telescoped back into place, he gunned his engine, and the beetle shot backward and spun round to face the oncoming noise.

A squarish black silhouette loomed high on the slope above the overhanging bank, which rose so steeply that a stone loosened by turning treads bounded with a clang off the beetle's armor in the wash below. The caterpillar halted momentarily, engine grumbling to take in the scene.

Dworn didn't linger to learn its reaction at spying a looter. A snap shot from his turret gun exploded directly in front of the other machine, throwing up a cloud of dust and--he hoped--confusing its crew. And the beetle was fleeing around the bend in the stream bed, keeping close to the bank.

A score of yards past the turning, intuition of danger made Dworn swerve sharply. An instant later, the ground blew up almost in his face--the bend had brought him into view, under the guns of the enemy above.

He wrenched the beetle around in a skidding turn and raced back for the bend where the overhang afforded shelter. Another shell and another crashed into places he had just left, and then he was safe—for the moment.

But it was an uncomfortable spot. The caterpillar rumbling wrathfully on the slope above him, couldn't see him as long as he hugged the bank, undercut by the water that flowed here in the rainy season; but, by the same token, he couldn't make a dash for safety without running the gauntlet of a murderous fire in the all-too-narrow way the stream bed offered. In open country, he would not have hesitated to count on his ability to outmaneuver and outshoot the caterpillar ... but here he was neatly trapped.

And it was nerve-racking to be unable to see what the enemy was about. It seemed to have halted, judging the situation just as he had been doing. Now, though, he heard its engine speed up again, and the grinding of its treads came unmistakably closer. His ears strained to gauge its advance as it came lurching down the slope, till it sounded only a few feet away and Dworn braced himself to shoot fast and straight if it started coming down over the bank. Then it paused again, and sat idling, hoping no doubt that he would panic and show himself.
He didn't. The caterpillar's engine raced up once more and began to labor under a heavy load. There was an increasing clatter of falling stones. Then Dworn remembered the great digging-blade it carried, and realized what it was going to try.

Ten feet to his right the bank began giving way. Tons of rubble thundered into the gully. Dworn winced and moved away as far as he dared. He heard the caterpillar back and turn, then it snarled with effort once more and another section of the overhang caved in with a grinding roar.

Inside minutes at this rate, it would either have driven him from his refuge or buried him alive. Now it came rumbling forward for the third time; rocks showered from the rim directly above his head, and he saw the bank begin to tremble.

* * * * *

Dworn braced himself. Even as the wall of earth and rock began leaning outward above him, he gave his engine full throttle. The wheels spun for one sickening instant, then the little machine lunged forward from beneath the fresh landslide and was climbing, bucking and slewing, up the slope of loose soil created by the ones before.

The caterpillar loomed black and enormous on his left hand, so close that it could not have brought its guns to bear even if its crew had expected the beetle to take this daring way out. With its shovel lowered and half-buried, it could not swing round quickly--Dworn had counted on that.

As the beetle's flank cleared the corner of the digging blade with inches to spare, Dworn's gun turret passed in line with the space between the blade and the caterpillar's treads, and he jabbed the firing button. The explosion wreathed the monster's forward half in smoke and dust, and into that cloud it tilted forward, teetered ponderously and then slid headlong to the bottom of the wash as the loosened bank gave way conclusively under its great weight.

Dworn looked back from the hill crest to see it still floundering, treads furiously churning sand, struggling to fight clear of the avalanche it had carried with it. The beetle laughed full-throatedly, without rancor. This hadn't been the first nor the tightest corner he'd been in during the dangerous course of his wanderyear; and in that hard school of life you learned not to worry about danger already past.

At another time, he might have returned to the battle in hope of capturing the additional supplies the caterpillar carried and--still more valuable booty--the chart it would have, showing the location of its other caches. But now he was in a hurry--this refueling foray had cost him a couple of hours, and the moon was already high.

So he slipped quietly away over the ridge and set his course to the east.

Beyond the hilly land, the terrain ironed out into level alkali flats where a vanished lake had been in the long-gone days when the earth was fertile. There he opened the throttle wide. The plain, white in the moonlight, rolled under the racing wheels at ninety and a hundred miles an hour; air whistled over the carapace....

Impatience surged up in Dworn once more. Eagerly he pictured his forthcoming reunion with his native horde--and with Yold, his father, chief of the horde.

Countless times in the long wanderyear--in moments when death loomed nearer than it had in the brush just past, and he despaired of surviving his testing, or in other moments, yet harder to bear, when the immensity of the desert earth seemed about to swallow him up in his loneliness--he had grasped at that vision now soon to be real: he, Dworn, stood before the assembled horde, the year of his proving triumphantly completed, and he received before them all the proud, laconic commendation of the chief, his father.

Hunggrily he scanned the horizon ahead, saw with leaping heart that it was no longer flat. Along it a black line rose, and grew ragged as it came nearer, and became an endless line of cliffs, marching straight north and south as far as the eye could see.... The Barrier!

Dworn recognized familiar landmarks, and altered his direction a little so as to be heading directly for the year's-end rendezvous. He knew, from childhood memories even, the outline of that vast stone rampart as it appeared by moonlight. Every year the Barrier formed the eastern limit of the beetles' annual migration, as naturally as the shore of the sea was its westward terminus. So it had been for a thousand years or more, as far back as the oldest traditions reached: generation after generation, hunting, foraging, and fighting--from the Barrier to the ocean, from the ocean to the Barrier.

* * * * *

To right and left the serried cliffs stretched out of sight--the edge of the world, so far as beetles knew. If you examined the contour of its rim, you could see how it corresponded point by point to the irregularities of the hilly land on its hither side. Some time, millennia ago, a great fault in the earth's crust had given way, and the unknown lands of the continental interior had been lifted as if on a platform, five hundred feet above the coastal regions. Or perhaps the coast had sunk. Legend attributed the event to the ancients' wars, when, it was said, some unimaginable weapon had clef the continent asunder....

Dworn perforce slowed his breakneck pace as the ground grew uneven again. He guided his machine with instinctive skill over the ascending slopes and ridges, eyes combing the moon-shadows for the first sign of his
people.

Then, a couple of miles ahead, he glimpsed lights. His heart bounded up--then sank with a prescient dismay; there was something wrong--

The fires that winked up there--four, no, five of them, under the very rim just before the cliffs rose sheer--didn't look like campfires. They were unequally spaced, and they flared up and waned oddly by turns, glowing evilly red.

Dworn braked the beetle to a stop on a patch of high ground, and sat straining to discern the meaning of those ominous beacons. To his imagination, rasped raw by expectation and the tension of long travel, they became red eyes of menace, warnings.... He tried the infrared viewer, but it showed no more than he could see with the naked eye. Only ghosts paraded across the screen, ghosts of the folded slopes that rose to the abrupt wall of the Barrier. Nothing seemed moving there; the whole sweep of broken and tumbled landscape appeared dead and lifeless as the moon.

But yonder burned the fires.

Sternly Dworn reminded himself that this night he was mature, a warrior of the proud beetle race. He thrust his fears resolutely aside; there was nothing to do but find out.

The beetle drifted forward, but cautiously now, at a stalking pace. Dworn took advantage of the lie of the land, continually seeking cover as he advanced, to shield him from whatever eyes might be watching from the silent slopes above.

Boulders lay ever more thickly strewn as he neared the Barrier cliffs, and he skirted patches of gravel and loose stones that would have crunched loudly under his wheels. Only occasionally, emerging into the open, he glimpsed his objective, but his sense of direction kept him bearing steadily toward the fires.

Fifteen minutes later, the beetle's blunt nose thrusting from under a shelf of rock that would disguise its outline if anything was watching, its motor noiselessly idling, Dworn knew that his premonitions had not been in vain. He looked out upon a scene that chilled his blood.

The burning machines, scattered for two hundred yards along the talus slope where destruction had come upon them or where they had plunged out of control, were beetles. Or they had been. Now they were wrecks, smashed, overturned, fitfully aflame.

There was no sign of an enemy. But here was the havoc which some powerful enemy had wrought, it could not have been long ago.

He strove to find identifying marks on the blackened hulks, but in the uncertain light could make out at first no more than the female ornaments which had graced two or three of them. Names and faces flashed through Dworn's mind; he could not know yet who had perished here, which faces he would not see again....

It hardly occurred to him to speculate that anyone might be left alive on the scene of the debacle. For one thing, the destruction's thoroughness was too evident, and besides, in Dworn's mind, by all his background and his teaching, human and machine were inextricably one; when one perished, so did the other....

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There was a dull explosion, a shower of sparks and a spreading glare as a fuel tank blew up. The flare revealed the pillar of smoke, blood-colored by reflection, that towered into the night above the scene.

And it revealed more. For Dworn saw by that unholy light that one of the nearer beetles--capsized and burned out, its carapace burst raggedly open--it bore the golden scarab emblem which was the chief's alone.

The sight smote Dworn like a physical blow, so that he almost cried out aloud. Somehow it had not even crossed his mind that his father Yold could have been among the slain in whatever disaster had fallen upon the beetles here.... Others might die; but his father was a pillar of strength that could not fall--the grave iron-willed chief, demanding and rewarding, for his son impartially as for all the people....

Dworn's breath choked in his throat and his eyes stung. Fiercely he told himself that a beetle, a chief's son, did not weep.

Not to mourn--to revenge, that was his duty. By the law of his people, the bereaved son must seek out and slay not less than three members of whatever race had done his father to death. Until then, his father's insatiate spirit would roam the deserts without rest....

But Dworn did not even know as yet who had done this night's work.

Suddenly, by the new blaze that still continued, he saw movement, a dull sheen of metal moving, and he froze the gesture that had been about to send him forward into the arena of death.

The infrared was useless; by it the flickering firelight was blinding. Dworn bit his lip in anger at his own lack of precaution, and hastily twisted his sound-receptor control to maximum. The crackling of the flames swelled to a hissing roar, but through it he heard the unmistakable creaking sound of treads. Beyond the smoke moved an indistinct and monstrous shape.

Dworn's jaw muscles set rock-hard and his hand flashed to another control. His turret gun revolved soundlessly,
and the crosshairs of the sight danced across the mirrored image of the approaching thing. His finger poised over the firing button, he braced himself to fling his machine into swift evasive action before the enemy's perhaps overwhelming firepower could reply--

The monster lumbered slowly into the light, canted far over and traveling with an odd sidling motion along the steep rubbly slope. Great treads set far out on each side of the squat, ungainly body preserved it against overturning. Its flattened forward turret swiveled nervously from side to side, peering blackly from vision ports steel-shuttered down to squinting slits.

And Dworn relaxed. The red hatred that had blazed up in him subsided into mere disgust; he watched the great machine's wary progress with a familiar, instinctive contempt. It was a scavenger, huge but not very formidable, drawn from afar by the fires which promised loot, salvageable scrap, perhaps even usable parts, fuel or ammunition.... It could not possibly have been responsible for the carnage; such cowardly creatures gave a wide berth to the beetle horde.

The monster ground to a halt amid the wreckage. Then its engine bellowed with sudden power and it spun half round, one tread spraying gravel, and backed hastily away up the slope. And Dworn was aware that the noise of creaking treads had redoubled. He cast about, and saw, laboring upward from below, another big machine, closely similar to the first.

Both scavengers came to a stop, facing one another across the fading of the fires, their unmuffled engines grumbling sullenly. Dworn watched them narrowly, expecting the shooting to begin any moment. But the scavengers' way of life was not one that encouraged reckless valor. After a long minute, a hatch-cover was lifted in the first arrival's armored back; a cautious head thrust forth, and shouted hoarsely, words clear to Dworn's amplified hearing:

"Better go back where you came from, brother. We got here first!"

The other scavenger's turret-hatch also swung slightly open. A different voice answered: "Don't talk foolishness, brother. We've got as much right here as you, and anyway we saw it first!"

The first voice thickened with belligerence. "We've got the advantage of the ground on you, brother. Better back up!"

"Oh, go smelt pebbles!" snarled the other. No doubt that was a scathing rejoinder among the scavengers.

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Dworn grimaced scornfully and brought his turret-gun to bear on an outcropping midway between the disputants. Either of them outweighed the little beetle twenty times over--but at this juncture a single unexpected shot would probably send both of them scuttling for cover--

But he halted again on the verge of firing. For he had not stopped listening, and now his trained ears picked out another, an unfamiliar sound from the background of noises.

It was a queer rattle and scurry, mingled with a high-pitched buzz that could only come from a number of small but high-speed motors. It was not a sound the exact like of which Dworn remembered having heard before. He went rigid, staring, as the sound's source came into view.

A column of little machines--lighter even than a beetle, and more elongated--advancing in single file, multiple wheels swerving in the leader's tracks as the column wound nearer along the mountainside. As the firelight fell on them they gleamed with the mild sheen of aluminum. Round vision-ports stared glassily, and turbines buzzed feverishly shrill.

With astonishing bravado, the flimsy little vehicles, one behind another, came parading onto the wreck-strewn slope.

And what was more startling still--no two of them were alike. The leader mounted a winch in plain view; behind came another machine fitted with oddly-shaped grappling claws, and next one bearing a mysterious device terminating in front in a sort of flexible trunk.... Strangely, too, they didn't seem to carry any armament--no snouting guns, no flame or gas projectors.

Despite that fact or perhaps because of it, something sounded an alarm deep in Dworn's mind.

Their diversity itself was uncanny, that was certain. In all Dworn's experience, machines were the work of races whose traditions of construction, handed down from forgotten antiquity, were as fixed and unvarying as the biological heredity that made one race light-haired, another dark....

A hatch-cover clanged shut, and another. The squabbling scavengers had finally noticed the appearance of outside competition. The one upslope raced its engine uncertainly, swung round to face the buzzing invaders, hesitated.

The newcomers, for their part, seemed oblivious to the scavengers' presence. Their column began dispersing. A grapple-armed machine laid hold on one of the wrecked beetles and, whining with effort, sought to drag it to leveler ground. A second, following, spat a burst of sparks and extended a gleaming arm tipped by the singing blue radianc
...of a cutting torch.

The first-come scavenger growled throatily and lumbered toward the interlopers, plainly taking heart from their air of harmless stupidity. Behind it, the other scavenger came clattering up the slope to its fellow's aid.

Flame bloomed thunderously from the muzzle of the first one's forward gun. The machine with the torch was flung bodily into the air and went rolling and bouncing down the hill, wheels futilely spinning. The gun roared again, and the exploding shell tore open a flimsy aluminum body from nose to tail. Motors whirred frantically as the pygmies scattered before the charging behemoth. One of them darted witlessly right under the huge treads, and disappeared with a brief screech of crumpling metal.

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The fight was over as quickly as it had begun. The scavenger wheeled, snorting, and fired one more shot into the dark after its routed opponents....

Dworn muttered an imprecation under his breath. No chance of frightening the scavengers off now that their blood was up and their differences forgotten; and a lone beetle could scarcely stand up to two of them in a knock down fight. To rush in now would be suicidal.

He gave up the idea of investigating the scene of disaster more closely, and backed stealthily away, keeping to the cover of the rocks. At a safe distance he began circling round, downslope.

What he could and must do now was to locate what was left of his native horde. It had numbered about fifty when he had departed for his wanderyear; a dozen, perhaps more, had died on the mountain tonight. He must seek out the survivors, and help plan retaliation against whatever enemy had dealt them this terrible blow.

Yet something else nagged at his mind, until he halted to gaze achingly once more toward the glowing embers up there, where the scavengers now clanked to and fro about their business.

Dworn recognized that what bothered him was the puzzle of the unidentified little machines that had turned up on the battlefield only to be sent packing. During his yearlong solitary struggle to survive, he had developed an extra sense or two--and in the queerly confident behavior of those buzzing strangers he had scented danger, a trap....

So it happened that he was still looking on at the moment when the trap was sprung.

A star, it seemed, fell almost vertically from the zenith, falling and expanding with the uncanny silence of flight faster than sound. The scavengers had no time to act. Dworn caught one faint glimpse of a winged shape against the sky, limned by the flashes that stabbed from it as it leveled out of its terrific dive.

One scavenger shuddered with the force of a heavy explosion somewhere within it, and subsided, smoking. The other too staggered under crippling impacts, but ground somehow into motion, spinning and sliding crazily down the gravel slope. Then, as the first attacker's shock-wave made the very earth tremble, a second and a third plunged from the black heights, and as the last one rose screeching from its swoop the whole lower face of the hillside boomed into a holocaust of flame and oily smoke. The fleeing scavenger was gone, enveloped somewhere in an acre of fiery hell.

Dworn, two hundred yards away, felt a searing breath of heat, and with a great effort controlled the impulse to whirl round and race for opener ground. He sat still, hands cramped sweating on the beetle's controls, while the sky whistled vindictively with the flight of things that circled in search of further targets.

When, after a seeming eon, their screaming died away, he released held breath in a long sigh. He found himself trembling with reaction. Still he didn't stir. He was ransacking his memory for something he should be able to recall but which eluded him--a myth, perhaps, heard as a child beside the campfires of the horde--

The old men would know; Yold would have known. At thought of his father, the grief and fury rose up again in Dworn, and this time he knew the object of his vengeful anger. There was small doubt now in his mind that those flying machines which struck so swiftly and so murderously had been the beetles' attackers.

But he didn't know what they were. He knew, of course, about the machines called hornets, which could fly and strike at fearful speeds like that, outracing sound. But the hornets flew only in daylight, and made no trouble for the nocturnal race of beetles. These--were something else.

And more--between the deadly night-fliers and the harmless-looking aluminum crawlers he had seen, Dworn sensed some connection, some unnatured symbiosis. He had heard vague rumors about such arrangements, but had half-discounted them; any of the peoples whom he knew at first hand would have scorned to enter into alliance with an alien species.

Lastly, he realized bitterly, he didn't even know where the enemy's lair, their base on the ground, might be....

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The moon stood high now. But the Barrier, close at hand now, rose like an immense black wall, folded in shadows, revealing no secrets--wallowing off the world the beetles knew from the unknown beyond. Involuntarily Dworn shivered. He couldn't be sure--but it seemed to him that the destroyers had come from over the Barrier and had flown back there.
He set his machine in cautious motion again and stole along, making northward and keeping close to the Barrier. It occurred to him that the beetle horde, routed and fleeing, might well have hugged the cliffs for protection against flying foes.

The going here was not easy. The terrain seemed increasingly unfamiliar though he should have known every foot of it. But— he remembered no such tumbled crags, no such great heaps of stony detritus as blocked his way and forced him into long detours.

Finally he halted to take his bearings, and, looking up, discovered what had happened. The black rampart of the Barrier was notched and broken. Sometime in the past year, since Dworn had left this place to begin his wandering, a quarter-mile-wide section of the upper crags, hollowed and loosened by the slow working of millennial erosion, had fallen and spilled millions of tons of rock crashing and shattering onto the slopes below. Here now water would run when the rains fell, and in ten or twenty thousand years, perhaps, a river-course would have completed the breach.

Dworn wondered fleetingly whether any living thing had been here when the cliffs fell. If so, it was buried now, crumbling bone and corroding metal, under the mountain for all time to come.

He set about skirting the rockfall, still searching the ground for traces of beetle wheels. But there were very few wheel or tread marks of any description to be seen—and that was strange in itself.

Impulsively he halted again and listened, his amplifier turned up. He should have heard faroff engine-mutterings, occasional explosions from the desert to the west, where normally the predatory machines and their victims prowled and fought all night long over the sandy tracts and the desolate ridges. But there was nothing. A silence, vast and unnatural, lay upon the wastes in the shadow of the high plateau.

He looked up again at the fallen rampart of the Barrier. The great landship had opened, as it were, a gateway to the unknown lands in the east—a gateway for what?

There was a strangeness here since last year, and the strangeness crept chillingly into Dworn's blood, made the mountain air seem thin and cold.

As he started again, he noticed yet another curious thing. He was crossing a sandy natural terrace, and the soft soil here was traversed by a row of indented marks that marched in a straight line across the open space. They were scuffed depressions, such as a ricocheting projectile might have made—but oddly regular in shape and spacing, almost, he thought fancifully, like giant footprints, ten feet apart.

Dworn was growing numbed to riddles. He shrugged impatiently and pressed the accelerator again.

He would push on northward for a few more miles, he determined, and if he still found no sign of his people, he would circle back to the south.

The moonlight shadow of the huge tilted boulder ahead was inky. But Dworn was keeping to the shadows by preference, remembering the death from above; so he cut close around the overhanging rock.

Too late to swerve, then, he saw the gleam of something stretched across his path. A metallic glint of deceptively slender strands which, as the beetle rolled headlong into them, snapped taut without breaking, sprang back and flipped the beetle clean over to fetch up against the rock with an ear-shattering bang.

Half-stunned by the suddenness of it and the violence with which he had been flung about, Dworn blurriedly saw other cables settling from overhead, coiling almost like living things around his overturned machine. Then he glimpsed something else; stalking monstrously down from the unscalable crag above, its armor glimmering in the moonlight, a machine such as he had never imagined—a machine without wheels or treads, a nightmare moving on jointed steel legs that flexed and found holds for clawed steel feet with the smooth precision of well-oiled pistons. A machine that walked.

Capsized, its vulnerable underside exposed, the beetle was all but helpless. One hope remained. With wooden fingers Dworn groped for the emergency button, found it—

The propellant-charge went off beneath him with a deafening roar. The beetle was hurled upward and sidewise, in an arc that should have brought it down on its wheels again—but the ensnaring cables tightened and held, and Dworn's head slammed against something inside the cabin. The world burst apart into a shower of lights and darkness....

* * * * *

Dworn came awake to a pounding head and blurred light in his eyes. He moved, and sensed that he was bound. His vision cleared. He saw that he was in a closed, half-darkened chamber—and that discovery alone made him shudder, he who as a free beetle had spent his whole life under desert skies. His feet rested on a floor of hard-packed sand, and his back, behind which his wrists were lashed together was propped uncomfortably against a wall ribbed with metal girders. The room was circular and its walls converged upward, into tangled shadows overhead; the chamber was roughly bottle-shaped.

To one side a door stood ajar, and it was thence that the light streamed, but from where he was Dworn couldn't
see into the space beyond.

He tried hard to collect his thoughts. When had everything stopped making sense? When he had first glimpsed the fires that were burning beetles on the mountainside, or....

The converging lines of the wall-girders led his eyes upward. The shadows overhead resolved themselves as he studied them, and Dworn's heart pounded as he commenced to understand what manner of place he was in. The roof of the bottle-shaped chamber--he was sure it must be underground--was no roof, but was the underside of a great machine complex with gear-housings and levers connected with the six powerful metal legs radiating from it, their cleated feet resting on a shelf that encircled the bottle-neck. It squatted there, motionless above him, sealing the entrance to its burrow....

Trapped. For some reason he couldn't guess at, he had been taken alive--his human body, at least; he didn't know what had become of the rest of him, the machine that was part and parcel of him too.

The light suddenly brightened. The door at one side was swinging open.

Dworn blinked at the glare from the lighted room beyond. Against it a figure stood in silhouette, and he saw that it was a woman.

She was slender, not very tall, and her hair was jet-black, a striking frame for a startlingly pale face. Here beneath the earth she must not get much sun.... In that white face her lips were shockingly red, the color of fresh blood. And the nails of her slim white fingers were crimson claws. After a moment, he realized that both must be painted--a strange thing to him, for there was no such practice among beetle women.

She was clad in a coverall suit of much the same design as the green garment Dworn wore according to beetle custom. But her garb was shiny black, and in front, between the swelling mounds of her breasts, was an emblem he did not understand; the shape of an hourglass, in vermillion red.

She stood gazing at him, smiling a little with a curve of scarlet lips that revealed white, sharp-looking teeth. Dworn groaned for his voice; but she spoke first.

"Patience, beetle," she said. "I'll attend to you in a moment."

The words had the accent of a strange speech, but they were intelligible. Dworn stared uncomprehendingly at her, mumbled, "Who--what are you?"

She moved nearer and stood smiling down at him. "Why, beetle, don't you know?... I'm the spider who caught you."

"Spi-der?" Dworn fumbled with the unfamiliar word. "I don't--"

Her eyes too were black, very black and intense. She said slowly, "You don't know about spiders, beetle? Strange. It must be that till now there were none of our kind on this side of the Rim."

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Dworn's aching head was not serving him well, but a part of his intelligence functioned to grapple with the implication of her words. "The Rim"--that must mean the Barrier, as seen from its eastern side. Then she, and others like her, must have come from beyond the Barrier. A walking machine could descend by the broken path of the landslide.

But "spider"--the word rang some bell deep in his mind, some recollection of childhood's fairytale bogeys perhaps, but he still hadn't succeeded in grasping the memory.

He growled, "I don't know--but if you'd untie my hands, I'd show you what a beetle is."

She eyed him thoughtfully. Then she smiled, showing the sharp little white teeth again. "Presently I'll free you. When it's quite safe. As soon as--" Her hand dipped to a small black case secured to her belt, and came up with a diminutive gleaming object--a slender needle thrusting from a liquid-filled plastic cylinder fitted with a plunger. "Do you know what this is, beetle?"

Dworn glowered silently.

"When I've injected this fluid into your veins, you will have no will of your own left. You'll do what I say, and only what I say--for the rest of your life, beetle!"

Dworn's eyes clung in unwilling fascination to the glittering needle. He said through stiff lips, "Now I remember. Your kind is a legend among my people. The evil women who have no men... who kill their male children at birth, and trap their mates from among the other races, and kill them, too, when they no longer want them.... Spider!"

His gaze collided squarely with hers, and she needed no skill to read the loathing in it, rendered more violent by her beauty that he could not help but see.

Her eyes dropped first. She clutched the needle and muttered fiercely to herself, "But when you've had the injection, it won't matter. I'll say, 'Love me!' and you'll love me, and 'Die!' and you'll die...."

Dworn stared burningly at the slim figure in black with the scarlet hourglass on her bosom. He was alert again, and his mind was racing. To all appearances he was lost--but something in the spider girl's manner gave him an
unreasonable hope.

He said abruptly, "So. Why didn't you use your poison while I was stunned? That would have been easy."

She looked away. "You ask foolish questions, beetle. Naturally, I had to prepare myself according to our customs. I had to paint my face and make myself beautiful...."

He said inspiredly, "You are beautiful."

Her reaction was surprising. She stood gazing raptly at him, lips slightly parted the hypodermic forgotten in her hand. Dworn sensed that had he been unbound, he would have had no trouble overpowering her.

She whispered, "It's true, then!"

And he realized forcibly how young she was--the painted lips made her look much older, and the shadows--which he now saw were also painted on--beneath her eyes. Only a girl, and if she had been one of his own people he would have looked at her twice and more than twice....

But above their heads the great spider-machine's underparts gleamed dully, straddling the sunken den. And the spell lasted only a moment.

The girl straightened her shoulders and took a deep breath. "Why am I talking to a beetle? It's time--"

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There was a clang of metal from somewhere in the room beyond. The girl's face reflected sudden fright, beneath its painted mask. She spun round and took two steps toward the inner door, but even as she did so, the door swung wide, and dark figures crowded through it.

The girl cried, with terror and anger in her voice, "What do you mean, coming into my Nest like this? You have no right--"

The interlopers were three in number, and all of them were women, wearing black garments like the girl's, with the red spider symbol on the breast. The one in the lead was elderly, her hair wisped with gray, and her face was lined by years and passions; her eyes were flinty, her mouth thin and cruel. The other two were younger; one was a strapping blonde wench taller than Dworn, who moved with a powerful and formidable grace; the other was short, soft-looking, with a child's pouting mouth and a queer, mad glint in her dark eyes.

The older woman said, "No right? You've had your own Nest for all of three months now, dear Qanya, and already you tell your Mother that she has no right to enter?"

The girl quailed. She retreated step by step until her back was against the wall beside Dworn, and met the old woman's eyes with a look half fright, half defiance.

"But, of course, you have your reasons," the Spider Mother went on bitingly. Her hard eyes stabbed at the bound and helpless Dworn. "Somewhere you managed to catch this, and bring him in without letting anyone know, and paint your face and prepare the needle.... You chose to forget that in times like these there are others of the Family whose claim to a mate has priority over yours!"

"That's true, Mother!" said the tall blonde energetically. The plump girl licked her full lips and said nothing.

"Quiet, Purri!" snapped the Spider Mother. Her eyes raked the girl Qanya again. "Well, and what do you have to say for yourself?"

Qanya's black eyes flashed. "I caught him myself," she blazed. "You've no right--"

"No right, no right," mocked the old woman. "Why, I believe that, if you'd dared, you'd have blocked up the connecting tunnel so we couldn't walk in on you. Who has rights is for me to decide--and for me to decide whether you're whipped and sent back to the young girls' dormitory. Until I've made up my mind--" She turned and frowned thoughtfully at her two companions, jabbed a finger at the tall one. "You, Purri, stay here and see that nothing happens to the catch, and make sure our little Qanya doesn't misbehave. I'm going to my Nest and check over the Family ledger, to settle the question of who's first in line for a mate. We've got to be strict, now that the cursed night-fliers are everywhere and it's been so long since we trapped a presentable male." She eyed Dworn once more, and smiled thinly. "He's a fine youth. Who knows? I might even take him for myself."

Dworn had no stomach for the compliment. Secretly, he was twisting his bound hands behind him, trying to loosen the knots. Those knots had been none too skillfully tied, and given time.... But he had to desist as the tall Purri strode near and stood over him. She cast a glance after the retreating backs of the Spider Mother and her other proteges, then devoted all her attention to Dworn, surveying him in critical silence and with a business-like eye for detail.

Qanya huddled against the wall; her dark eyes were enormous, and tears had streaked the make-up on her cheeks.

Purri nodded satisfiedly. "He'll do," she said matter-of-factly to Qanya. "The Mother should give him to me. It's a choice between me and Marza, really--" She jerked her head toward the door through which the dark, pouting girl had gone--"But Marza doesn't really appreciate a mate. All she cares about is seeing how long she can take to make them die."
Qanya stared hotly at her. She said in a stifled voice, "You're a beast, and Marza is a beast, and--"
"Careful!" said Purri lazily. "If you say anything against the Mother, I'll have to report you." Arms akimbo, she looked scornfully down at the younger girl's tearful face.

Dworn had been right about the knots Qanya had tied. They were slipping. He wrestled in silence, hoping for a little more time... Then he was sickeningly aware that Qanya was looking toward him, had seen what he was doing. For an instant he froze.

Qanya said hurriedly, "Anyway, you're a beast, Purri. A greedy one. You've had two mates already--why didn't you make them last? And I've not even had one."

"When you're older," said Purri loftily, her back still turned to the struggling beetle, "you'll understand more. But you ought to know from your schooling that there are some races that mate for life--and among them, the males dominate the female. We spiders are above such degrading practices."

Qanya's eyes flicked momentarily to Dworn, who was wrenching at the final knot. "Yes, yes, I know," she said. "But I still say it isn't fair--"

Dworn came catlike to his feet, ignoring the pain of cramped limbs. The cord with which he had been bound was looped in his hands. With a single stride he was upon the unwarmed Purri; one hand clamped over her mouth, cutting off outcry, and the other hand whipped the cord tight around her. She fought with the strength of a man, but futilely. Dworn ripped a length of fabric from her clothing and improvised a gag; when he was done, the spider woman could do no more than kick and gurgle a little.

During the brief struggle, Qanya had watched without making a sound, hands pressed against the girdered wall at her back. As Dworn faced her now, breathing hard, he saw fear written large in her face.

She whispered, "Beetle, you won't hurt me?"

Dworn hesitated briefly. There was no doubt she had helped him--if only out of jealousy of the others. But at the same time she was a spider, a natural enemy. And time was desperately vital. In a flash of inspiration, he saw that there was one way to make sure of his escape.

"If you're quiet," he promised, "I won't hurt you. Not much, anyway." Then his arm was about her, pinioning her, while his free hand snaked to her waist and plucked the hypodermic from its case. For a moment she struggled and even tried to bite him, as she saw what he was about to do. Then, clumsily but effectively, he had stabbed the needle into her upper arm and pressed the plunger home.

He felt her stiffen and then relax, shivering, as the drug coursed through her blood. He released her and stepped back, watching her warily.

"How do you like your own medicine, spider?" he demanded harshly.

The girl stood motionless. Her black eyes, fixed on him, seemed to dull as if with sleep.

"Do you hear me?"

"Yes," she said tonelessly.

"Do you obey me if I give you orders?"

"Yes."

Dworn grinned exultantly. It had worked--But there was no time to lose. The Spider Mother might return any moment.

"Where is my machine?"

She answered without expression, "I left it where it was. I didn't want it, I was only seeking a mate."

Dworn sighed with heartfelt relief. He looked upward, toward the spider-machine overhead: "All right. I command you to take me back to the place where you left my beetle."

Qanya turned silently toward a slender steel ladder that rose to the belly of the crouching metal monster. Dworn followed her, his nerves still strung close to the snapping point, but with hope leaping in him.... On the floor, the trussed-up Purri stared up with round eyes and made smothered noises.

They clambered into the spider through a port in its underside, past the engines and the great drums of steel cable which served to snare the spider's prey. The space within was cramped, barely big enough to hold two, and its instruments and controls were bewilderingly strange to Dworn. The tangle of switches and levers that must govern the mechanical legs made no sense at all to him, and he felt a moment of near-panic: if the hypnotic injection's magic should fail, he would be quite helpless here.

Braving it out, he snapped, "Make it go!"

Obdurately Qanya touched this and that control. The spider's engine throbbed with power, and its legs straightened, lifting it so quickly as to cause a sinking sensation in the stomach. From overhead came a creaking, and a band of light appeared and widened, grew dazzling as a circular trapdoor opened on daylight.
Dworn caught his breath. He hadn't reckoned with its being daytime; evidently he had been unconscious longer than he had supposed. But he couldn't worry about that.

"Go on!" he rasped. "Outside!"

The machine clambered stiffly out of its burrow; sand crunched under its steel feet. Blinking at the sun, Dworn saw that the trap opened on a stretch of boulder-strewn wasteland; it must not be far from the foot of the great slide. The trapdoor was coated with sand to make it appear only a half-buried rock, and in the near distance were other, closely similar outcroppings that were very likely the entrances to other spiders' burrows.

"Get us away from here! Quick!" ordered Dworn shakily.

Still wordlessly, her face smooth and mask-like, the girl set the walking machine in motion. It moved with a queer rolling gait which made Dworn dizzy, though it stilted over the irregularities of the ground with scarcely a jar. Dworn felt nakedly exposed, riding high above the ground in broad daylight, but he gritted his teeth and tried not to think of the probability of attack by some day-faring marauder. He supposed the spider girl, accustomed likewise to a nocturnal life, would have felt the same fear of the light, if she hadn't been hypnotized.

Under the drug's influence she apparently couldn't speak unless spoken to. However, there were questions he wanted to ask her.

First--"What do you know about the attack on the beetles last night?"

"I know there was a battle," said Qanya flatly, without looking up from the controls. "I didn't see it, but the Mother and some others were prowling at the time, and saw. It was the flying things, which have given us too so much trouble."

That, if true--and he judged that it must be true--confirmed his prior suspicion, and killed another suspicion he had entertained for a little while--that the spiders themselves might have been the ambushers. He demanded, "What do you know about those night-fliers?"

"Very little. We do not know just what they are or where they came from. They began appearing hereabouts only four months ago, which was three months after the Rim collapsed and the Mother decided that we should descend and try the hunting on this side. Since then they've grown more and more numerous. They fly by day as well as by night, and attack everything that moves. They've taken several of our Family, and I think they've made heavy depredations on the peoples that inhabit this region. We spiders would have abandoned the location before now, but we feared to be caught migrating in the open...."

* * * * *

Dworn gazed apprehensively out at the glaring desert that was rolling past the spider windows. The news that the aerial killers also operated by day was most unwelcome. But as yet there was no sign of an enemy.

He said, "The little ground machines--unarmored, made of aluminum. They're allied in some way to the flying ones, aren't they?"

"We think so. Wherever the flying machines have made a kill, the crawlers appear before long to carry away the spoils. And if they're attacked--the fliers come swooping down within minutes to defend or avenge them. So most of the other inhabitants have learned to leave the crawlers alone; it's extremely dangerous to meddle with them."

Dworn could confirm that fact from his own observation.

Evidently the spider folk, even though they came from beyond the Barrier as the mysterious others apparently had too, knew little more than he himself had already discovered. But--there was one more question.

"Do you know," he asked tensely, "where these strangers' home base is? Where do they fly from?"

The girl looked doubtful. "We're sure only that it's somewhere beyond the Rim, where we used to live."

That much, too, he had guessed. Dworn subsided into glum silence, as Qanya impassively guided the machine on its way, covering distance at a surprising speed.

Then, even by the unaccustomed daylight, Dworn recognized first one landmark and then another, and knew they were approaching the spot where he had been trapped last night. A weird return, riding as master in the monstrous machine that had snared him!

As the great tilted rock hove in view, Dworn strained for the first glimpse of his abandoned vehicle. When he saw it, lying still overturned in the shadow of the boulder, he sighed in relief. Its door was ajar, where Qanya must have dragged him stunned from the machine last night... but it appeared unscathed. The fear at the back of his mind, that scavengers might have happened on it--in which case they would have had it dismantled and carried away by now--was happily unrealized. For that he perhaps had partly to thank the enemy against whom he had sworn vengeance, the flying fiends who had decimated and terrorized the peoples native to this land....

"All right," he ordered. "Stop here!"

The walking machine crunched to a halt, standing almost over the beetle. Dworn looked at the spider girl, then, in irresolution.
In the pitiless daylight she was still piquantly beautiful, though her pale face was still smudged with the remnants of her ceremonial make-up and her eyes were veiled, withdrawn. Yes, she was even desirable.... Dworn put that thought determinedly out of his head. After all, she was an alien and an enemy; she had sought to make a doomed slave of him.

But now that her usefulness to him was over, he didn't know just what to do about her. The sensible thing would be, of course, simply to kill her. Somehow he felt that he couldn't do that. It was one thing to kill in the impersonal fury of machine combat, a different matter when the victim was helpless within your reach.... And he remembered that she had helped him escape.

He could command her to return to her people, to the tender mercies of the Spider Mother--who would know by now of Qanya's part in Dworn's disappearance. Damn it, that would probably be worse than killing her in cold blood! He was wasting time. Angry at himself for his unbeetlelike softness, Dworn postponed deciding what to do with her till he should have inspected his machine and made sure it was in shape to travel.

"Come along," he told the girl gruffly. "Outside."

Once more she obeyed unprotesting. The two clambered out of the belly of the standing spider--Qanya staring before her with sleepwalking fixity, Dworn nervously scanning sky and horizon for hostile machines. The sunlit waste was terrifyingly immense bright, and empty. With a physical ache of yearning he longed for the cramped security of his own machine's cabin.

He brushed past the girl and ran toward the upside-down beetle--he could easily right it with a spare emergency cartridge, and then he would be on his way in a normal world again--

He stopped short with one hand on the beetle's dull-black steel flank. The world seemed to rock around him.

* * * * *

The girl watched him without expression as his face went slack with horror, as he completed his arrested movement and dived into the cabin to confirm the dreadful discovery that first touch had disclosed to him.

When Dworn climbed out he was white and shaking. He took a few steps away from the beetle and sank weakly down on the sunwarmed sand.

"What's the matter?" asked Qanya.

He turned and looked dully at her. He had completely forgotten that she was there.

He said listlessly, "I'm dead."

"Of course you're dead." Her brows puckered faintly as she gazed at him. "Naturally, I drained your fuel tanks last night--"

Dworn surged to his feet and took one step toward her, fists knotted, blown by a gust of fury. She stared levelly back at him, unflinching--and he halted, shoulders drooping. "Ah, what's the use?"

He should have foreseen this--not that it would have done any good if he had. The beetle's fuel supply had been drunk up by the spider now towering over them; and the beetle's engine, even idling at minimum consumption, had used up what little remained in the system, and had stopped. And it was as if Dworn's own lifeblood had been drained and his own heart had stopped beating.

Qanya was still watching him blankly. She said, "Can't you start it again?"

Dworn was jolted by the realization that she genuinely didn't understand that he was dead--that there was no way of restarting an engine once stopped. Until now he had supposed that all races were the same in that respect; but evidently spiders were different. In fact, now he remembered that, when they had entered the spider-vehicle, the girl had pushed a button that apparently started the engine. Spiders, then, died and came to life again every day--a startling notion.

But the beetles--Among the thoughts that tumbled disjointedly through Dworn's head in this awful moment was a clear vision of the night, five years ago, when his machine-existence had begun: when, in the horde's encampment by the sea a thousand miles from here, the beetle's last seam had been welded, and its engine set going with the appropriate ritual of birth.... The sixteen-year-old boy's heart had beaten high and proudly, in tune with the heart of steel and fire that had begun to throb at that moment. And the life expectancy of the two was measured with the same measure, the life of flesh and that of metal indissolubly entwined....

He mumbled dazedly, "I'm dead, do you hear? Dead!"

There was a sudden howling in the sky. Flashing overhead, as the two stood momentarily petrified, went a shrieking flight of half a dozen winged shapes--stubby vanes slanting back from vicious noses, they hurtled low over the desert and vanished swiftly into the distance, dust-devils dancing across the ground in the whirling wind of their passage.

Dworn stared after them, and his eyes narrowed. A new and desperate resolve had begun shaping itself in his mind.

Of the things he had meant to do in life, it was no use thinking any more of rejoining his people. He was dead
to them, for sure—not even a beetle any more, but only what was left of one, a ghost.... But a holy duty, stronger than
death, remained to him; his father was still unrevenged.

What he could do against a foe so powerful as those who had just passed over, he had no idea—but perhaps a
ghost could accomplish what a living man might well deem impossible.

He motioned Qanya peremptorily toward the waiting spider-machine. "Come on. We're taking your machine,
and we're going to find them!"

For a moment she seemed to hesitate ... then she obeyed. If her face was paler than usual, Dworn failed to
notice it.

* * * * *

The spider-vehicle lurched and swayed, even its marvelous system of shock-absorbers protesting as it climbed
steeply, straddling upward from rock to rock.

Dworn clutched at handholds inside the pitching cabin and tried to combat the sympathetic lurching of his
stomach. Qanya huddled tensely over the controls, slim hands flashing nimbly to and fro as with incredible deftness
she guided the laboring machine.

Dworn risked a glimpse from the turret-windows, then shut his eyes with a rush of giddiness. They were
climbing now up the steepest part of the great slide, where the mountainside had collapsed in a chaos of splintered
rock and tumbled crags that would have been utterly impassible for any wheeled vehicle. Below them, the sloping
valley floor they had left appeared from this height entirely flat and sickeningly far away. And still the cliff-heads
frowning above them seemed terribly remote.

"How ... far?" gasped Dworn.

"It can't be very far now to the top," said Qanya, without glancing up from her absorbed concentration. Both
their lives were in her hands; a slip, a misstep, and they might fall hundreds of feet among the jagged rocks to their
death.

For seconds at a time, the walking machine poised motionless, one or more of its clawed limbs groping for
footholds. As it clambered painfully upward, it was hopelessly exposed to attack if it should be sighted from the air.

Dworn, the beetle told himself savagely, you are not only a ghost, you are an insane ghost. Only a madman
would have undertaken such a journey.

The cabin heeled wildly as the machine grappled a ledge and, its engine panting at full throttle, levered itself
upward a few more feet.

He had commanded the spider girl to find the route by which her people had descended. But twice already they
had missed the way and had arrived at dead ends beyond which it was impossible to climb higher; twice they had
been forced to descend and search for an easier path. It had been scarcely noon when they started; now the sun was
already sinking low.

Dworn could not even be sure that he would find his sworn enemies beyond the Barrier. But the duty of
vengeance was all he had left to live for, since what was to have been his triumphal return had ended in bereavement
and catastrophe.

And a dead man, thought Dworn bleakly, needs something to live for, even more than other people do.

The world came level again, for the moment. The machine sidled precariously along a narrow ledge girdling an
unscaleable wall of rock, as Qanya sought a spot to resume the ascent. Dworn winced at the thought that the way
might be blocked again. But, no—fifty yards further on, the wall was breached, and toppled boulders formed a
perilous but not impossible stairway.

Just as Qanya grasped the levers which would set the spider scrambling upward once more, there was a sound—
one grown hatefully familiar to Dworn since the night before, the feverish buzzing of a number of light high-speed
engines. He opened his mouth to hiss a warning, but Qanya too had heard. Instantly she guided the spider-machine
as close as possible to the cliff, where the hollowed rock afforded some shelter, and twirled a knob that made it sink
down, legs folding compactly.

They waited scarcely breathing. A couple of times before they had huddled like this, while flights of the
winged enemies whistled over ... but the wingless ones? It seemed impossible that they should be up here, where
surely nothing that ran on wheels could travel....

* * * * *

The head of a column of the aluminum crawlers came into view, whirring along the ledge with a confident air
of knowing where they were going. One by one, the little machines rolled past within a few feet of the crouching
spider, hastening on with an uncanny pre-occupation.

Dworn saw that, like those he had seen earlier, they were of diverse kinds; and several of them, fitted with
claws and racks for transporting booty, were heavily laden now with metal plates and girders carved from some
larger machine, a roll of caterpillar tread, a slightly bent axle.... The last pygmy in line, whose afterbody was a
bloated tank, gurgled as it jolted by, and trailed an aroma of looted fuel.

A few yards beyond the staring watchers, each of the little plunderers pivoted sharply in its turn and without even slackening speed vanished straight into the cliff-face. Dworn and Qanya looked incredulously at one another.

"A tunnel!" Dworn grunted in realization.

That explained one mystery, at least--how, if the winged and wingless strangers' home base was somewhere above the cliffs, the wheeled machines contrived to forage at the foot of the Barrier. They must have one or more inclined tunnels, bored through solid rock for a distance that staggered Dworn's imagination. Emerging at this level, they had found or constructed a passable road the rest of the way to the valley floor.... Now he noticed that the ledge to which the spider had so laboriously climbed showed signs of being an often-used trail, and the cliffs it skirted exhibited in places the raw marks of recent blasting.

"Remember this spot," he told Qanya. "If we should return this same way--there's evidently an easier path down."

She said nothing. Dworn wondered wrily if, in her drug beclouded mind, she was aware of how unlikely it was that either of them would be returning from beyond the Barrier.

A mad enterprise indeed--a ghost and a zombie, going to seek out a foe whose numbers and whose might grew ever more apparent. The tunnel opening here was clear evidence of engineering resources and skill far beyond that of any of the machine races Dworn knew.

Its discovery was no help to them, since it was far too small to admit the spider.

"Go on!" Dworn ordered doggedly. "At least we know now that their dwelling can't be far!"

Qanya glanced briefly sidelong at him, then moved the levers, and the spider rocked upright once more and began to climb.

The sun was low, and the shadows of rocks and dunes in the valley behind them were pointing long blue fingers eastward, when the machine staggered up the last precipitous ascent and stood on level ground at the summit.

Dworn took a deep breath and looked ahead, looked for the first time in his life upon the unknown land beyond the Barrier.

At first glance, it differed little from any of the desert country where he had lived all his life. The ground shelved gradually away from the rocky rim on which they stood; far off, against the darkening eastern sky, blue mountains rose murkily, but between here and the ranges lay a vast shallow depression, an arid sink floored with wind-rippled sand. Perhaps it had been a lake-bed once, before natural or unnatural cataclysms, and the millennial drying-up of all this country, had emptied it of water. Or perhaps--as its circular form suggested--it was one of those other, mysterious depressions which were scattered irregularly across the face of the earth where no lakes had ever been; those, legend said, were scars left by the ancients' wars.

The rich light of the declining sun fell at a shallow angle into the miles-wide bowl and brought out with startling clarity the maze of wheel-tracks, crossing and criss-crossing, which covered its sandy expanse and testified to a fever of recent machine activity there. The light gleamed, too, here and there, upon scurrying metallic shapes, that raced by ones and twos or in trickling columns to and from the center of the bowl, where--

Dworn strained his eyes and his capacity for belief in an effort to make sense of the structures there, miles away. He was not very successful, for the scene was too unlike anything he had ever looked on before.

There were certain races which built stationary dwellings--Dworn knew of the scale-makers who lived, in colonies sometimes of considerable size, beneath individual armored, anchored domes sunk into the face of some impregnable rock; he knew of the sand devils with their pits, and now he had seen also how the spider people nested. But the huge buildings that loomed yonder, lowering and windowless, and the winged things clustering thick on the ground about them, were such as he had never seen in his nomadic life.

Atop a slender tower that spired above the squat structures he could make out something which turned and turned, something like a broad net of lacy wires, revolving steadily from east to west, from north to south. Strange, too, the smooth-surfaced ways that radiated outward in four directions, like an immense cross, broad paved roads that came to abrupt dead ends a mile or more from the central buildings.... After a moment, though, he guessed that those were runways for the aircraft which flew from this place.

The unknown builders were obviously a mighty people, a people who had perfected their peculiar form of organization on a gigantic scale. And a people who acted and thought strangely; for their behavior, as Dworn had observed it, suggested a chilly-blooded and fanatic discipline, a regimentation which he found monstrous and repellent.

Dworn turned questioning eyes on Qanya.

"I don't know what they are," she answered his unspoken query in a voice that faltered. "I remember this valley.
But a few months ago it was uninhabited. All this has been built since then."

Dworn hesitated. He was seeing very clearly now just how hopeless this mad expedition was. Nevertheless, he had sworn vengeance, and he could at least perish with honor.

But—Seeing the fear in Qanya's face, it came to him sharply that, after all, she had no part in his blood feud. She had served him well by bringing him this far. The vague plans he had had, of using the spider-machine for an attack on the enemy, stood revealed as rankest folly. Big and powerful as the spider was by ordinary standards, against such as those it could accomplish little more than a man with his bare hands.

Which was what Dworn would be—He stifled further reflection, said crisply: "You can go now. I'll remain here; I have a duty to perform. But you can return—go make your peace with your people, or whatever you like."

Qanya's black eyes met his squarely. "I won't," she said.

"Now see here--" Dworn began, and broke off, thunderstruck.

"B-but," he gulped, "you can't disobey me. The drug, the spider poison--"

"Doesn't work on a born spider. I must have neglected to mention that, naturally, we're all immunized against it." She smiled with a flash of those sharp white teeth.

"Then--then--" Dworn stumbled, feeling his preconceptions tossed helter-skelter. "Then you must have come with me—of your own free will!!"

"At first," murmured Qanya, "I knew you'd never trust me unless I pretended ... and I was curious, too, to see how it was to be the one that obeyed. And then ... well, you'd have known, if you'd ever seen how the drug really works. You should have realized, anyway, when I laughed at you.... But you do so love to be masterful don't you?"

For a moment, Dworn's chief emotion was one of quick rage at the revelation of how thoroughly she'd deceived him. Then the anger subsided and left him feeling merely foolish, as he saw that she'd merely let him deceive himself. And, finally—as it came home to him that this girl had followed him of her own choice into exile and great danger—a new and quite unaccustomed feeling flooded in on him, a queer sense of humility.

"I'm sorry," he said confusedly. "I didn't--I don't--understand."

She breathed in a barely audible voice, "You said I was beautiful.... And you hadn't the drug."

From far away, from around the vast, mysterious buildings, came mournful hooting sounds, a sighing and a sobbing as of some mythical monster in torment.

Dworn was rudely recalled to realization of where they were—and of the fact that, as the spider-machine stood poised here on the cliff-edge, it would be starkly visible from over there, seen against the setting sun.

He gave up trying to unsnarl the tangle of his own feelings. He said hurriedly, "But you should go back. There's no time—I have to go on. But there's no reason you should die."

Qanya's face was drawn and determined. "No," she said flatly.

"I don't know what you're talking about. But I won't leave you now...."

The distant sighing rose to a whining roar.

"Quick!" cried Dworn in desperation. "Find cover. I think we've been seen!"

The girl reached for the controls and the spider's engine raced up. But it was already late. Off yonder, along that one of the radiating runways that stretched toward them, something was moving, racing swiftly and more swiftly outward with its long shadow following it.

All at once the moving thing left its shadow behind, and Dworn recognized it for an aircraft taking off.

Then he had to snatch for a handhold as the spider-machine lunged into a dead run. At full speed on the level ground, it could make good; the ground outside skidded past at fifty or sixty miles an hour.

Qanya had spied some rocky outcroppings, which might furnish a modicum of shelter, about a mile away and some distance from the brink of the cliffs, and she was heading for them. But the terrain nearer at hand was implacably flat—and the enemy was airborne, a vicious winged shape growing at terrifying speed. Its whistling roar swelled and grew deafening.

Qanya shouted something inaudible and pointed. Dworn understood, and, holding on for dear life in the pitching cabin, clawed his way within reach of the fire-controls. Wrestling with the unfamiliar mechanism, he fought to train the spider's guns on the hurtling attacker.

Puffs of smoke bloomed high in air—but any hit on such a fast-moving target, from so unstable a platform, would have been a miracle. The enemy screeched overhead, and an instant later flame and thunder erupted all around the running spider. The machine stumbled and for a moment seemed going down, but it righted itself and staggered on.

Dworn shook his ringing head and saw the flier banking steeply half a mile away, while a second and a third were climbing against the sky, gaining altitude to dive.
They couldn't last another thirty seconds, couldn't even hope to reach the doubtful cover of the rocks.... Up ahead, two hundred yards, was a low mound, only a few feet high, the only nearby elevation of any sort. And it was plainly artificial, though wind-piled sand had softened its outlines; others like it were scattered around the periphery of the great sink, and Dworn guessed their nature as he saw a column of the aluminum crawlers beginning to emerge from the side of the one just ahead. It must be the other end of a tunnel such as they had discovered among the cliffs....

He nudged Qanya urgently, shouted, "Head for that!"

She gave him a fleeting, wide-eyed look. The mound's low swell could furnish no shelter for the towering spider, and the tunnel mouth was of course much too small to enter. But she veered without slackening speed in the direction indicated.

Dworn abandoned the useless guns. The mound, with a gleaming line of crawlers still parading out of it, swept closer; and at the same time the desert echoed back the screaming onrush of the two new attackers.

Dworn wrenched open the cabin door with one hand. His other arm circled Qanya's waist, dragged her away from the controls. She cried in uncomprehending shock as he swung her before him into the open doorway. They swayed there, high above the speeding ground, wind whipping at them as the spider pounded blindly on.

The mound loomed immediately at hand. Dworn prayed that he had judged the moment right, and with a mighty leap launched both of them out into space.

A pistoning steel leg barely missed them. Even as they fell, the air was torn by explosions as the swooping fliers opened fire.

* * * * *

Dworn hit the ground with almost stunning force. His hold on the girl was broken and he was rolled helplessly over and over by his own momentum. But he fetched up on hands and knees, bruised and breathless but unhurt.

From the corner of his eye he saw Qanya sitting up dizzily, half-buried in the drifted sand that had broken their fall. Apparently she too was uninjured, but she was staring in horrified fascination after her runaway machine.

The spider careened onward, no hand at its controls. It hit the line of crawling little machines coming from underground; it knocked one spinning end over end, and stepped squarely on another, stamping it flat. It recovered its balance amazingly, and loped on, even though one leg was buckling beneath it--

Then it was hit dead-on by what must have been at least a hundred-pound high explosive rocket.

The winged killers shot low overhead with an exultant whoop of jets, peeling off to right and left of the column of smoke that rose and towered where the spider had been struck. Out of the cloud, metal fragments soared glinting upward and arced back to earth, and on the ground, amid smoke and dust, a metal limb was briefly visible, flexing convulsively and growing still.

Dworn heard a smothered sound beside him. A tear rolled down Qanya's smudged cheek, and Dworn thought fuzzily, Even spiders can cry. Only, he corrected, she's not a spider any more she's now just a ghost like me.

If he hadn't been a ghost already, if he hadn't lost his own machine--the idea of jumping clear and saving both their human lives while letting the spider be destroyed would never have occurred to him.

He came to himself, hissed, "Down! Keep low and maybe they'll overlook us!"

They huddled together on the slope of the sandhill, while the victorious flying enemy circled round in a miles-wide sweep and began descending toward their base again, wing-flaps braking them for landing.

And on the ground meanwhile, the crawlers which had come from the tunnel were proceeding on their way, leaving two of their number behind with strange indifference to their own casualties.

"What'll we do?" quavered Qanya.

Dworn had time to take stock of the situation. The tunnel-mound was, as he had seen before, the only cover--and that a poor one--for a considerable distance. It was all of a quarter mile to the edge beyond which the cliffs fell away.

He tried to sound hopeful--whether for Qanya's sake or to keep up his own courage, he could hardly have said. "I think we'll have to stay here, and hope we're not noticed, until it gets dark. Then, maybe--"

Qanya caught her breath sharply and gripped his arm. "Look--there!"

Still far away across the sloping floor of the great bowl, but rapidly approaching from its center, moved a dust cloud. Beneath it, the expiring sunlight glistened on the aluminum shells of at least a score of the ground machines.

Dworn said grimly, "Might have expected it; they'll be coming to look over the scene of action and pick up the pieces. We've one chance; keep out of sight behind this little hill, and maybe they won't investigate too closely."

Qanya nodded, biting her lip. She could reckon as well as he how much that chance was worth.

* * * * *

The buzzing motors came nearer. The two cowering in the lee of the mound, almost without daring to breathe, heard them halt, slow to idling speed one by one a little way off, where the wrecked spider lay. From that spot
obscure sounds began rising, thuds and gratings and a shrill hissing noise.

But then--the whine of a single high-speed engine rose again, clear to their hearing. One of the enemy was approaching around the flank of the sandhill.

They crouched motionless, frozen. No hope in either flight or fight; on the open ground, they would be run down in no time, and they had no weapons--even the notion of a weapon, as something apart from the fighting machine that carried it, was alien to their thinking.

The enemy vehicle rolled into full view and nosed slowly along the base of the mound; its motor whining questingly, only a few yards of gentle slope between it and the huddled pair. Its vision-ports glinted redly in the sunset glow, and Dworn could almost feel the raking of murderous eyes from behind them.... Like the other machines of this kind he had seen it was small and without armor--it couldn't weigh more than a couple of thousand pounds, and it carried no guns. From the vantage of his armed and armored beetle, he had regarded its like as flimsy and harmless-looking.... But now he realized for the first time how helpless a mere human was against such a thing, and, with an irrepressible shudder, how easily the grappling and cutting-tools this one was equipped with might be employed for--dismantling--flesh and blood.

The machine paused momentarily. Then its engine revved up again. It rolled on past, giving no sign of excitement, and vanished beyond the hillside.

"Dworn, Dworn, it didn't see us!" Qanya was sobbing with relief.

Dworn was staring after the enemy, brows puzzledly drawn downward. The sounds from the other side of the mound went on uninterrupted--a clangor of metal, the prolonged shrilling of a cutting-torch, where evidently they were at work breaking up the smashed spider-vehicle.

He said huskily, "Something's very queer about them.... Wait. I've got to take a look."

Qanya glanced at him in quick alarm as he started wriggling to the crest of the sandhill. Then she followed silently, and peered over the top beside him.

Twilight was descending, but they could still see easily enough what went on out there. Not a hundred yards away, the little machines swarmed about the spider, bringing their various wrecking equipment into play to dismantle it rapidly under the watchers' eyes. Torches flared, winches tugged at fragments of the shattered monster. An aluminum cylinder with a serrated alligator snout rolled triumphantly away, bearing aloft the shank of a great steel leg....

But Dworn's attention was riveted by what was happening closer at hand. Here, near the tunnel-entrance that opened just below their observation point, lay the two crawlers which the runaway spider had disabled. One of these, the one which had merely been overturned and severely dented, was already being dragged away, wheels still helplessly in the air, by a towing-machine. The other had been smashed beyond repair. Around it several of the new arrivals were busy, callously and efficiently beginning to take it apart.

Dworn watched them at it, and the dreadful suspicion that had budded in his mind ripened into a monstrous certainty.

Aluminum skin was swiftly stripped away; frame members of the same metal were clipped neatly asunder by a machine armed with great shearing jaws. The engine came loose and was hoisted aloft carried dangling away by another specialized machine. In an incredibly short time, little but a bare chassis remained, and that too was being attacked by the salvagers.

And Dworn knew at last beyond all doubt, what manner of things these were.

Beside him he heard a sharp gasp, and turned to put a warning finger on Qanya's lips. He drew her gently back with him, out of view of the activities on the farther side of the mound.

"You understand what that means?"

"Then you know what we have to do."

She nodded again.

Between them the word hung unspoken--a word not to be uttered lightly, so awful was it in its connotations, freighted with memories of a terror rooted in the youth of the world.

Drones.

* * * * *

In the beginning--said the stories--there were the ancients, who were great and powerful beyond the imagining of the latter-day peoples. But the ancients were divided among themselves, for some of them were good and some of them were evil.

So they fought one another, with the terrific weapons of devastation which they owned. And the good triumphed in the end, as it must--though at terrible cost, for in those wars the earth was stripped almost lifeless;
searing flame, plague, climatic convulsions wiped out the varied life which once populated the world, and finally there remained only the peoples of the machine, all of whom—diverse though their ways of existence had become, and for all that they lived in ceaseless conflict with each other—were descended from the victors in that primal struggle of men like gods.

But the evil old ones, though they were vanquished and their seed utterly annihilated, had nevertheless found a way to perpetuate their evil upon the earth. For before the last of them died, as a final act of vindictive atrocity, they created the drones....

Qanya was shivering uncontrollably. She whispered, "No one remembers when they last came. Some thought there were none left in the world."

"It's the same among my people," Dworn said hushedly. "There's no record of the drones' having appeared in the time of anyone now living.... But here they are."

From out of sight came the rattle and clank and whine of machines at work. And from farther away, from the direction of the great windowless buildings, there were hootings and throbbing sounds, and from time to time a deep rumbling that shook the earth.

Those noises were somehow unspeakably horrible now—now that they knew there was no one there. No one—not the machines, without feeling or thought, without life, with only the blind meaningless activity of unliving mechanism set in motion and made self-subsisting a thousand or two thousand years ago....

With infinite caution the two humans peeked once again over the summit of the mound. Out there on the flat, the little wingless drones buzzed to and fro with their false seeming of animation, finishing their work.

From around the great buildings, whose interior no living eyes had ever looked upon, lights winked oddly blue through the thickening dusk. They caught glimpses of immense moving machinery, and heard mysterious sounds. Once and again, it seemed that in the open space before the structures a great door opened in the earth, and against a blue light that streamed upward they saw a vast winged shape rise majestically from underground and roll slowly forward into the shadows to join others already ranked there.

"What are they doing?"

"I don't know...." Dworn reflected, grasping at memories of the legends, the traditions he had heard. What he recalled was ominous. "I think I can guess, though. I think they're getting ready to swarm."

Her stifled exclamation was sign enough that she understood.

If the guess was right, the danger was on the verge of being multiplied many times over. Soon now, a swarm of queen ships would take to the air and fly in all directions, sowing the seed of the robot plague broadcast far and wide; one such colonizing vessel, no doubt, had founded this great hive only a few months ago. The things worked fast....

And Dworn's duty, and Qanya's, became all the more clear and urgent. Duty to spread the warning, at whatever risk to themselves. In the face of that, Dworn's mission of personal blood vengeance became unimportant—even if it had been possible to take such vengeance upon a foe with no life to forfeit.

He whispered to Qanya, "The ground machines are about to leave. When they're gone, we'll have to make a break for it."

"Wait," said Qanya tensely. "They'll sight us in the open, and then what chance will we have?"

Dworn tried to make out her expression, but in the darkness her face was only a white blur. "We've got to try. There's no other way."

"Perhaps there is. What about the tunnel?"

Dworn was brought up short; that idea hadn't occurred to him at all. He said slowly, "I see what you mean, It's..."
only big enough for one-way traffic--and the drones evidently have some system of remote control, so that outbound expeditions aren't using it at the same time as returning ones...."

"So, if we wait till some of the wingless ones enter from this end, and hurry through the tunnel close behind them--" Qanya left the sentence uncompleted. Dworn knew she could imagine as well as he what would happen if they failed to time it right, and met a drone column coming from the opposite direction. Still, the sound sense of the girl's ideas was obvious.

"All right," he said. "We'll try it that way."

It was another nerve-fraying wait until a file of ground machines came winding near and vanished one after another into the tunnel.

The two watchers gave them a little time--not too much--to get clear of the entrance. Then Dworn clasped Qanya's hand tightly in his own, and together they plunged down the sliding slope of the sandhill. The tunnel mouth yawned in its side, the bore on which it opened slanting steeply down into the earth, inwardly lit with eerie blue light.

Hearts pounding, they raced into the tunnel.

It was an unreal, nightmare flight. The blue shaft curved and descended endlessly. Endlessly ahead of them echoed the snarling of drone engines.

They ran with lungs near to bursting, through air heavy and foul with exhaust gases--trying frantically to keep close behind that engine noise, while it receded inexorably before them. And once and again, amid the tricky tunnel echoes, Dworn was almost sure that other drones had entered and were descending the narrow way behind them, and before his eyes flashed hideous visions of the two of them overtaken and run down, here where there was scarcely room to turn, let alone fight or hide.

The featureless walls were pressing inward to crush them, swimming before eyes filmed with exhaustion, in the blue shimmer which no doubt sufficed for the perceptions of the drones but which hardly served human vision....

The tunnel was in fact perhaps a thousand yards long.

But it seemed as if they had been staggering for a lifetime through the nightmare, through the blue glow, and it scarcely seemed real when a patch of night sky showed through the exit before them, and when they stumbled panting out into the clean cold air of the mountainside, and saw the white radiance of moonrise over the Barrier cliffs above them.

They sank down to catch their breath on a rock not far from the tunnel. They'd made it none too soon--only a minute or two had passed when the night once more buzzed with motor noise, and a column of foraging drones rolled up the trail and plunged at full speed into the mouth of the shaft.

Qanya buried her face against Dworn's shoulder.

"Easy, now," Dworn whispered, patting her with clumsy gentleness. "The worst's over. We made it ... Qanya, darling, we made it!"

She looked up at him and by the moonlight he saw her smile tremulously. She said breathlessly, "Would ... would you mind saying that again, please?"

* * * * *

The moon was already high as they trudged across the rolling desert beyond the foot of the great landslip.

After the tunnel, the rest of the descent had been relatively easy; they had followed the trail used by the wingless drones, being forced off it only once by the passage of a cavalcade of the little marauders. And they had discovered, to their surprise, that the human physique--inferior though it might be to machines in ruggedness, speed, and other respects--was better equipped for traversing rough terrain than the most ingenious vehicle ever constructed.

But both of them, unaccustomed as they were to walking on their own feet, were dead weary. They tramped on doggedly, searching the shadows, hoping to come upon some living machine-creature--of what race, didn't matter now.

So far they had seen only abundant evidence that the drones were abroad in force tonight, preparing perhaps for their swarming time. Drones in the air and on the ground, and once the burnt-out shell of an unidentifiable machine with a crew of the wingless salvagers worrying it, and once the light of fires afar off where the winged ones had made a kill....

Qanya stumbled, and Dworn caught her round the waist as she swayed.

"Tired," she gasped in a little girl's voice, then stiffened her back with a resolute effort.

"We'd better rest--"

"No," she said shakily; and then abruptly: "Listen!"

Not very far away, lost somewhere among the tricky moon-shadows, there was a stealthy crunching. It was coming nearer.

With instinctive caution the two hugged the pool of shadow beside a boulder.
"Spiders!" Qanya recognized them first. They came prowling out of the shadows, crunching rhythmically across an open moonlit space towards a hollow beyond. One, two, four of them, moving with furtive caution through the perilous night.

They had to be intercepted, the warning given. But it was a critically dangerous moment--suspicious and on edge, they might fire at the first movement they saw.

"Stay here," said Dworn shortly. He thrust Qanya back into the shadows, and walked steadfastly out into the clear moonlight, in the path of the walking spider machines.

He raised one hand on high, palm outward in an immemorial gesture that he could only hope would be seen. He shouted at the top of his voice, "Stop! Don't shoot! I come in peace!"

His heart leaped. The leading spider ground to a halt, and the others behind it. He saw a dim figure move atop the foremost towering machine; and before he could speak again, heard the rasping voice of the Spider Mother herself.

"You! The one who got away--and who seduced one of us from the ways of her ancestors--? What peace can there be between you and us?"

"I bring," cried Dworn clearly, "warning of the Drone."

There was stunned silence.

Dworn sensed the other spiders watching from the height of their machines; and he guessed something of what must be going on in the mind of the fierce old woman staring down at him. She would be wondering if an alien, a mere beetle, would be so far without honor, so anxious to save his own skin, as to lie in such a matter.

Then he felt Qanya's hand in his, and heard her cry out, her voice vibrant and assured: "It is true, Mother! I have seen them too. The night-fliers, the raiders--they are the evil things our legends tell of!"

The great machine took two steps forward and knelt low to the ground. "Come here!" rasped the Spider Mother, and when the two advanced till she could look into their young faces--"You swear to this?"

"We swear!" they said at the same moment.

The Spider Mother's face was like iron. She looked from one to the other slowly.

"Then," she said stiffly and formally, leaning over to extend a wrinkled hand to Dworn, "let there be peace between us ... between me and mine and you and yours, and among all living peace ... till the evil is no more!"

Dworn took the hand, and answered, hurriedly recalling ancient custom: "Till the evil is no more!" And heard Qanya echo the words.

* * * * *

All night the desert was stirring, with a feverish hastening of messengers. These were at first spiders--then, members of a half dozen, a dozen other races, as the word was passed from one people to another--as tribe after tribe of hardbitten, suspicious warriors, fingers, fidgeting on triggers at the open approach of their hereditary mortal foes, heard and were electrified by the news--

The Coming of the Drone!

And hand gripped hand, all feuds were forgotten, the peoples mingled in a common effort of hurried mobilization. The desert land below the cliffs crawled with them, a mixed multitude of constantly increasing numbers, girding themselves for war.

Ferocious predatory machines--spiders, wheel-bugs, scorpions--formidable in their armor and bristling with guns, lay alongside the more pacific slugs and caterpillars and snails which in ordinary times were their natural prey, and were freely fuelled and provisioned out of the stores which normally their possessors would have fought to the death to safeguard against the despoilers....

In the presence of the drones, there were no more natural enmities. For the drones were the Enemy. Their coming meant that all life was kindred; deep in the heritage of every people was the almost instinctive knowledge that, if the drones were not checked as tradition decreed, their blind automatic propagation would end by sweeping every living thing from the face of the Earth.

Toward morning, the chiefs of a score of tribes held council of war in the very shadow of the Barrier. Their consultation was brief; there was no arguable question of what must be done, only of how. And if the drones were about to swarm, they must act promptly. No time to wait for the gathering of more distant peoples; no time to send word to the wasps or the hornets and gain aerial support. They must strike with what they had.

* * * * *

Dworn started awake as a hand touched his shoulder. He sat up, angrily flinging a coverlet from him.

"I didn't intend to sleep!" he muttered, rubbing his eyes and realizing where he was--below ground in the spiders' colony, whither he and Qanya had been taken and where he had been persuaded to lie down and rest a little while the warning was carried by others.

The tall blonde spider, Purri, was grinning maliciously down at him. "Hear the beetle talk! I suppose, after a
day spent in what, for you was comparative idleness, you felt like doing something really strenuous ... say going out and demolishing the drones' hive bare handed...?"

Dworn climbed to his feet. With a violent effort he kept from wincing at the protest of stiffened muscles and yesterday's collection of bruises.

"What's going on out there now? Where's Qanya?"

"There's really nothing more you can do, you know. I merely woke you because I thought you'd want to hear that your beetle-folk have been contacted--they'd holed up to lick their wounds about twenty miles south of here--and have joined the fighting force that's getting ready to attack the drones at dawn. As for dear little Qanya, she's sleeping angelically in the next chamber...."

"No, she isn't," said Qanya from the doorway.

"You, too?" said Purri with irritation. "And what do you want, scapegrace?"

Qanya's black eyes narrowed dangerously. She moved forward to Dworn's side and took a grip on his arm. "I might ask what you're doing here disturbing--"

"Both of you, you're wasting time," growled Dworn.

He'd heard with a queer pang that his people--those who remained alive--had been located. Not that it made any real difference, of course. His father was dead, and he, Dworn, was dead too as far as his own kind was concerned. Nor, in this world, was there anywhere else he could turn.

For the present, under the threat of the Drone, that didn't matter. All laws of all peoples were in abeyance for the duration of the great emergency. But once the threat was dissolved, and the old laws resumed their force, the plight of Dworn and of Qanya also would be what it had been--that of outcasts in a world where an outcast had no chance of survival.

Well, it was no use thinking of the future. Dworn said determinedly: "I want to see the end of this business, at least."

"And I!" declared Qanya. "We've earned that right."

Purri eyed them sourly, shrugged. "As you like. I'm in command here while the Mother's busy at the front. I'll see you get transportation up there." Turning toward the door, she glanced sidelong at Dworn. "You'll have to go separately, since a spider will only carry two. I'm leaving right away myself; you may come with me in my machine-..."

"No, he won't," declared Qanya with finality, tightening her hold on Dworn's arm. "He can ride with old Zimka."

Purri stalked through the doorway before them, grumbling to herself, "Why is it the best ones always get away?"

* * * * *

Earlier in the night, climbing spiders--the only machines which could manage the ascent of the toppled Barrier--had scouted the periphery of the drones' fortress, and discovered the sole possible approach to it. At a single spot above the slide, a low ridge made it feasible to surmount the rim and steal out onto the table-land beyond without coming in direct view of the enemy's installations.

Once that was known, the council of chiefs decided on a daring strategy. Up the thousand-foot slope of tumbled rocks below that one vulnerable point, a fantastic supply line was established. One by one, machines from among those massing on the desert below toiled upward until wheels or treads could carry them no further; then they were hoisted bodily over the precipices by the invaluable spiders, who anchored themselves firmly in place with the powerful steel cables they ordinarily used for snaring prey, and used other such cables as pulleys.

Through the remaining hours of darkness the joined forces labored with Herculean devotion to accomplish the seemingly impossible task. There were brushes with the enemy, for the wingless drones still came and went about the mountainside and from time to time their winged kindred flew overhead. But strict orders had gone out to all the allied peoples--avoid opening fire, avoid precipitating a general engagement, and freeze motionless whenever the fliers passed over. This last instruction rested on the observation that the robot predators, with whatever sensory devices they used, apparently had difficulty in spotting anything but a moving target.

In this wise, when dawn began to break, close to three hundred first-line fighting machines of a dozen different species had been raised to the summit of the Barrier. Thence they filtered cautiously out across the plateau, in a great arc moving to enclose the hollow of the drones.

* * * * *

The sky was lightening when Dworn and Qanya settled themselves to watch from the crest of the rocky ridge which had shielded the attacking forces' deployment not far from the brink of the cliffs.

Behind them, the spiders which had brought them here melted stealthily away toward the east, going to take their places in the battle line.
The two were alone once more, looking out over the vast circular depression infested by the enemy, just as they had yesterday at sunset. But today, as the sun rose, the situation was very different. For miles around the circumference of the great hive, there were furtive stirrings, last-minute movements of preparation for the imminent assault. From behind every outcropping and fold of the ground, grim gun-muzzles pointed inward, ready to begin spitting fire when the zero second came.

From here the central buildings of the hive were plainly visible, standing out against the sunrise. Around them moved many of the tireless worker machines; and the parked aircraft seemed more numerous than they had been the night before. Among them a score or more of winged shapes loomed conspicuous for their great size; when you made proper allowance for the distance, you realized that they were immense.

Those would be the queens--loaded and ready to take flight on their one-way journey to found new colonies wherever their evil destiny might lead them. The time of swarming was near.

Dworn scowled darkly, squinting against the light in an effort to judge the enemy's numbers. He grunted, "I hope ..." and bit his lip.

"What's wrong?" said Qanya tensely.

"Nothing.... Only it would have been well if we'd had time to bring up more reinforcements. But don't worry--we'll smash them." He was a little surprised to note that he said "we"--and meant any and all of the machine-peoples, united now in a common cause.

Dworn was bitterly wishing at this moment that he had had his beetle-machine again, and had been able to take an active part. As it was, he didn't even know surely just where in the battle line the beetles had taken up their position.

A distant explosion, a single gunshot, rolled echoless across the flats. It was a signal. Even as the shell hit the ground close to the ranked drone aircraft, motors had begun to pulse and snarl all along the farflung line. The desert began to spew forth attackers. A motley horde of metal things, they darted, stalked, and lumbered from their lurking-places, and as they advanced to the assault the firing commenced in earnest, became a staccato thunder that blanketed but failed to drown out the beginning alarm-wail of a huge mechanical voice from the fortress of the drones.

The enemy was not slow to react. Almost as the first rain of projectiles smashed down among them, jet engines began howling into life, and some of the fighter craft rocked into motion, wheeling out onto the runways.

The encircling attackers well knew the peril of letting any of those pilotless killers get into the air. Shellfire was being concentrated on the airstrips, striving to block them, plow them up with craters.

A fighter drone came roaring out one of the runaways gathering speed and beginning to lift. Dworn followed it with his eyes, feeling sweat spring out on his forehead, repeating under his breath without conscious awareness of what he was saying: "Stop him, stop him--"

Then the enemy craft spun round in the air, belching smoke, came apart and spilled along the runway for a hundred yards. A second, coming close behind it, plowed into the wreckage of its comrade, rolled over and over and became a furiously burning pyre. That strip was blocked.

All round the central hive smoke and flame were rising in innumerable places, from the paved ways and from the open desert. On another launching strip, just visible through the mounting inferno, one of the big queen-craft had sought to take to the air, and had been knocked out by heavy shellfire. Now its upended and blazing hulk tilted slowly over and collapsed burying beneath it several of the little wingless workers. In all the confusion these still scurried hither and yon, oblivious to the bombardment, laboring frantically but futilely to clear away the debris. Their efforts were useless, while the rain of explosives from the tightening ring of assault forces continued adding to the ruin and disorder within the hive....

Dworn sprang to his feet for a better view. He hugged Qanya to him till she gasped for breath, shouted in her ear over the thunder of the barrage, "We've got them!"

Close to the ridge where they stood a line of many-wheeled monsters rolled past--scorpions, moving along the battle front and, whenever the thickening smoke up ahead revealed a target, halting to wheel round and discharge their heavy-caliber tail guns.

Dworn had never liked scorpions, but he watched these with heartfelt approval. Then he stared, bewilderedly aware that something had gone wrong. The big machines had turned and begun heading toward the ridge, clattering along at their top speed and no longer pausing to fire.

Within moments, Dworn perceived that all the other attackers were doing likewise; everywhere on the blazing battlefield, they had ceased their advance and were scattering to seek cover.

Only then, as the firing slackened, did he realize that the sky had begun to echo with a spiteful screaming of flying things. Against the brightening daylight hurtled some two dozen dark winged shapes ... fighter drones.
Dworn realized they must have been out on patrol, and summoned back by the drones’ mysterious means of communication to defend the threatened hive. Now the flight was splitting into groups of two or three, diving to attack at one point and another and flitting away again so swiftly that human reflexes could scarcely act to train a gun.

Dworn glimpsed Qanya’s horrified face beside him, and the girl threw her weight against him and dragged him down among the sheltering rocks. Overhead, from out of the sun, shot three of the winged drones. They passed over before the shrieking of their flight could reach the ears, and Dworn caught a glimpse of bombs tumbling earthward. Thunder crashed as the scorpions hugging the ridge threw up a vicious defensive barrage, and was drowned out as the bombs landed all around. The rocks heaved, and dust and splinters showered down from above.

Only a dozen yards away, a scorpion came rumbling up across the crest, its many wheels jolting over the rocks, and halted there, its tail gun weaving angrily as it sought vainly for targets in the sky. Along one of its gray-painted sides was a long bright gash where something had barely glanced from its armor. And Dworn saw, too, the black outline of a mythological arachnid on its observation turret, which signified that the machine belonged to a scorpion chief.

* * * * *

Scarcely knowing what he intended, he shook off Qanya’s panic grip and plunged recklessly toward the big machine. As he scrambled over the rugged hilltop, he saw fleetingly what went on in the arena of battle—the allied peoples were being driven back, forced to concentrate their fire power on beating off aerial onslaughts. Meantime, the wingless drones about their beleaguered citadel worked feverishly to clear the way for their fighters that still remained undamaged on the ground.... Within minutes, unless something happened to turn the tide, there would be enough flying drones aloft to break the attack and inflict terrible losses.

Dworn found himself alongside the scorpion, just as its tail gun fired once more. The muzzle blast almost knocked him down, but he clawed his way up the side of the machine and began hammering on the observation turret hatch-cover.

"You in there!" he shouted. "Listen to me--"

The hatch cracked open and a grizzled head peered out, blinking at him with bewilderment and an automatic fierce suspicion. But at a time like this anything human was an ally.

"What's the idea?" demanded the scorpion.

The racket of gunfire and of jets made speech almost impossible. But Dworn pointed out across the sink, shouted: "Fire on the buildings--the central tower! They're controlled from somewhere--"

Luckily the scorpion leader—if that was who he was—was a man of quick understanding. He nodded vigorously and dropped out of sight again into the interior of his vehicle, bawling something to its driver. Dworn dropped off the machine's side as it lurched abruptly into motion. He watched, hardly breathing, as it slid to a halt at the bottom of the hill beside another of its tribe, and with shouts and gestures the word was passed on.

Inside a minute, all the nearby scorpions had begun banging away at the structures some three miles distant. The heavy scorpion guns were quite capable of carrying that far, and their shells had enough punch to do much damage to the buildings or to the central tower which still loomed occasionally visible through the drifting smoke....

But it was only a hope, perhaps even a forlorn hope. Dworn was fairly confident of his guess that the drones possessed some sort of central communication and control system—but it would take a lucky hit to disable that nerve center in time.

Qanya stumbled to his side. She cried something he couldn't hear over the continuous firing, tugged at him and pointed skyward with terror in her eyes.

The flying drones aloft had suddenly abandoned their scattered strafing attacks. With deadly machine-precision they wheeled into a single formation once more, and the whole flight came diving straight at the scorpion battery's position.

Dworn stood rigid, fists clenched at his sides, watching them scream nearer.

He ignored Qanya's pleading with him to take cover. No point to that—the drones' full force would blast the whole ridge to rubble and blanket it with their liquid flame.

At least, the enemy's reaction proved his inspiration correct. He noticed with fierce satisfaction that the scorpions were still doggedly firing....

The foremost drone came on, slanting down the sky until the gaping rocket-ports were plainly visible along its swept-back wings. But those sports still spat no flame. And it came on. It cleared the hilltop by no more than fifty feet, still diving faster than the speed of sound. It hit the desert slope beyond and ricocheted like a great projectile, bursting apart into fiery fragments that strewed themselves for a thousand yards across the rolling plateau.

* * * * *

Dworn picked himself up from among the rocks where he had been flung by the shock-wave of its near
passage, and was knocked sprawling again by the earthquake impact of a second drone that thundered headlong into
the earth a few hundred feet away, burying itself under a crater like that of a huge bomb.

He glimpsed a third craft going down to the west of them, just missing the rim of the Barrier cliffs and plunging
out of sight without a sign of coming out of its dive.

Those which remained in the air were flying aimlessly. Two of them passed over side by side, gradually
converging until, a couple of miles away, they locked wings and went spinning down toward the horizon in a deadly
embrace.

On the ground, a like confusion had befallen the wingless workers. Their scurrying suddenly lost all its busy,
planned efficiency. Some buzzed round and round in drunken circles; others ran head-on into one another, or
tumbled into shell-holes to lie futilely spinning their wheels.

A hush descended on the field of battle. After the fury of bombardment and counterattack, the relative silence
was deafening.

Dworn got to his feet for the second time and helped Qanya up; he grinned exultantly at her, oblivious of a
trickle of blood running down his face where a rock-splinter had hit.

The scorpion lying nearest the foot of the slope opened its hatch-cover. A man climbed out, clasped hands
together over his head and stamped on the gray monster's back in an awkward impromptu victory-dance. Cheers
rang faintly from far off down the silenced firing-line.

Then--the spell of premature triumph was rudely shattered.

From the direction of the breached and smoking buildings, there rose yet again the soughing roar of jet engines
gathering speed. Onto the runway to the west--the only one which the workers had managed to clear before their
central control was knocked out--came waddling an enormous winged thing.

Its multiple engines screamed up to a frenzied pitch, and it rolled out along the strip at increasing velocity. Its
huge wheels narrowly missed a dead fighter slewed across the way. Its tail went up.

Naturally, the queen ships wouldn't be dependent on the nerve-center of the hive that had spawned them; for
each of them carried within itself the full-grown robot brain, the nucleus of a new hive....

Shooting began again raggedly, the gunners caught unawares. Perhaps the great machine was hit--but to stop it
would take more than one or two hits.

It reached and passed the end of the runway, its wheels barely clearing the ground as the paved strip ended.
Black smoke belched from its engines as it spent fuel lavishly, fighting heavy-laden for altitude. It rocked with the
concussion of shells bursting all around it, and then it was soaring out over the Barrier, dipping and rolling
perilously in the downdrafts beyond the cliffs. But it steadied and flew on, out of range of the guns, rising and
dwindling until it was a speck, a mote vanishing into the western sky....

But no more queens escaped that day. The cannonade resumed with redoubled fury, and the guns did not fall
silent until nothing was left to stir amid the gutted and blazing wreckage that had been the citadel of the drones.

* * * * *

Morning wind blew over the plateau, clearing away the reek of battle, bringing air that was cool and clear as it
must have been in the morning of the world.

In that breeze like the breath of a new creation, it somehow seemed not at all strange to Dworn that he should
be walking in the open under a daylight sky, among a multitude of excited strangers, men and women of all races,
who mixed and exchanged greetings, laughed, shouted, slapped one another on the back ... then, perhaps, drew away
for a moment with eyes of wonder at their own boldness....

Nor did it seem strange that Dworn strolled round the smoldering drone fortress hand in hand with a girl of the
spider (who was by that token his hereditary foe,) and that he turned and kissed this enemy on the mouth, and she
returned the kiss.

They stood with arms around one another, on the edge of the jubilant crowd, and looked out across the vast
litter of smoking wreckage where scarcely a shell-holed wall stood upright now, from which the Enemy would no
longer come to threaten the life of the Earth.

"One got away," said Qanya soberly.

"Yes. Somewhere it will all be to do over again." Dworn glanced toward the empty west, whither the queen
flier had disappeared--where, perhaps, by now it would have crash-landed two or three hundred miles away, to spew
forth its cargo of pygmy workers and (if the inhabitants or the area where it descended didn't discover and scotch it
in time) to construct more workers, fighters, a hive no less formidable than the one that had perished today.

Dworn said, brow thoughtfully furrowed: "But maybe there's a good reason, even for the drones. Maybe they
serve a purpose...." He faltered, unable to phrase the idea that had come to him--a thought that was not only
unaccustomed but downright heretical. According to tradition the drones were the spawn of ancient evil and
themselves wholly evil--but, Dworn was thinking, perhaps their existence produced good if, once in a generation or
in ten generations, they came to remind the warring peoples that fundamentally all life was one in its eonlong conflict with no-life.

But he sensed, too, that that idea would take a long, long time to be worked out, to be communicated, to bear fruit....

Qanya's hand pressed his, and she said softly, "I think I know what you mean."

On one impulse they turned their backs to the ruins and gazed out across the throng of people, milling happily about, rejoicing, among the grim war-machines that stood open and abandoned on every hand. Near by, a crew of pill-bugs had tapped containers of the special beverage they brewed for their own use, and were inviting all passers-by to pause and drink.

"Your people are here somewhere," said Qanya. Her eyes on Dworn were troubled. "Over there to the south, I think I saw some beetles parked. Do you want to visit them?"

Dworn sighed. "Your people are here too."

"I know."

Neither of them moved. They stood silent, their thoughts the same; in a little while now, the Peace of the Drone would be over, and all this celebrating crowd would grow warily quiet, would climb back into their various fighting machines, close the hatches and man the guns and creep away in their separate directions. The world would go its way again, a world in which there was no place left for the two of them....

Dworn blotted the image from his mind's eye and bent to kiss Qanya once more, while the Peace lasted.

A voice called, "Dworn!" A familiar voice--one that couldn't be real, that must be a trick of his ears.

He turned. A little way off stood a small group of people watching them, and in the forefront was a stalwart man of fifty, in the green garment of a beetle with a golden scarab blazoned on his chest--

"Father!" Dworn gasped unbelieving.

They grasped one another's hands and looked into one another's eyes. Dworn was only dimly aware of the others looking on--among them the hard-faced Spider Mother, and the grizzled chief scorpion whose cohorts had struck the decisive blow in the battle.

Yold smiled with a quizzically raised eyebrow. "You thought I was dead, no doubt? You came on the spot where we were attacked and you saw--"

Dworn nodded and gulped. "I couldn't have been mistaken. I saw your machine there, wrecked.... And now I've lost mine." His voice trailed off miserably.

His father gave him a penetrating look. "I see. You're supposing that means everything is over."

"Doesn't it?"

The chief smiled again. "When you departed for your wanderyear, you were still a boy, though you'd learned your lessons and your beetle traditions well.... But now you're a man. We don't tell boys everything."

Dworn stared at his father, while understanding dawned like a glory upon him. To live again, the life he'd thought lost--

"So far as I could learn, your beetle was disabled through no fault of your own. In fact, by what these strangers tell me--" Yold nodded towards the Spider Mother and the scorpion chief--"you've proved yourself worthy indeed, over and above the customary testing. Of course, there will be the formality of a rebirth ceremony--which I have to undergo, too, so we can both do so together."

Dworn couldn't speak. Once again he had to remind himself that a beetle warrior didn't weep--not even tears of joy.

Then the Spider Mother spoke up, her voice brittle and metallic. "The girl will naturally be returned to us. After this business, I am going to have to take pains to restore discipline in the Family."

Dworn saw Qanya's desolate face, took one step to the girl's side and put a shielding arm around her. He felt Qanya trembling, and glared at the Spider Mother's implacable face.

"I won't go back!" Qanya cried vehemently. "I'll die first! I never wanted to be a spider, anyway!"

"And I," growled Dworn, "won't let you take her. I won't let her go--" his face was pale, but he went on resolutely--"even if it means I can't return to my own people."

The beetle chief surveyed the two young people gravely, then turned to confront the old woman. He said, "I don't see that you have any further claim on the girl. According to our customs, she too can be 'reborn'--this time into the beetle horde, as one of my people--and my son's."

The head scorpion, looking on, nodded approval and grinned encouragingly at Dworn.

The Spider Mother and the chief exchanged a long, stony look--on either side, the look of a ruler used to command.

"It would be too bad," said Yold softly, "to mar the Peace. But my warriors are within call, and...."
The Spider Mother turned away and spat. "Have it your way. Who wants weaklings in the Family!"

The chief glanced sidelong at Dworn and Qanya, and saw that they were wholly absorbed in one another. With an open-handed gesture he invited the Spider Mother to follow him.

"Shall we go, then," he suggested politely, "and--while the Peace still reigns--find out whether the pill-bugs' beverage is all they claim it is?"

THE END
Agreement which made Niobe a member of the Confederation. I was the Director of the BEE’s Niobe Division at that time. As a matter of fact, I’d just taken the job over from Alvord Sims. The Old Man had been ordered back to Terra, to take over a job in the Administration, and I was the next man in line.

“The banquet was a flop, of course. Like most mixed gatherings involving different races, it was a compromise affair. Nobody was satisfied. It dragged along in a spirit of suffering resignation—the Niobians quietly enduring the tasteless quality of the food, while the Confederation representatives, wearing unobtrusive nose plugs, suffered politely through the watered-down aroma and taste of the Niobian delicacies. All things being considered, it was moving along more smoothly than it had any right to, and if some moron on the kitchen staff hadn't used tabasco sauce instead of catsup, we'd probably have signed the Agreement and gone on happily ever after.

“But it didn't work out that way.

"Of course it wasn't entirely the kitchen's fault. There had to be some damn fool at the banquet who'd place the bomb where it would do some good. And of course I had to be it.” Lanceford grinned. "About the only thing I have to say in my defense is that I didn't know it was loaded!"

Perkins looked at him expectantly as Lanceford paused. "Well, don't stop there,” he said. "You've got me interested.”

Lanceford smiled good-naturedly and went on.

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We held the banquet in the central plaza of Base Alpha. It was the only roofed area on the planet large enough to hold the crowd of high brass that had assembled for the occasion. We don't do things that way now, but fifty years ago we had a lot to learn. In those days, the admission of a humanoid planet into the Confederation was quite an event. The VIP’s thought that the native population should be aware of it.

I was sitting between Kron Avar and one of the high brass from the Bureau of Interstellar Trade, a fellow named Hartmann. I had no business being in that rarefied air, since Kron was one of the two First Councilors and Hartmann ranked me by a couple of thousand files on the promotion list. But I happened to be a friend of Kron’s, so protocol got stretched a bit in the name of friendship. He and I had been through a lot together when I was a junior explorer with the BEE some ten years before. We'd kept contact with each other ever since. We had both come up the ladder quite a ways, but a Planetary Director, by rights, belonged farther down the table. So there I was, the recipient of one of the places of honor and a lot of dirty looks.

Hartmann didn't think much of being bumped one seat away from the top. He wasn't used to associating with mere directors, and besides, I kept him from talking with Kron about trade relations. Kron was busy rehashing the old days when we were opening Niobe to viscayaculture. Trade didn't interest him very much, and Hartmann interested him less. Niobians are never too cordial to strangers, and he had never seen the BIT man before this meeting.

Anyway, the talk got around to the time he introduced me to vorkum, a native dish that acts as a systemic insect repellant—and tastes like one! And right then I got the bright idea that nearly wrecked Niobe.

As I said, there was both Niobian and Confederation food at the banquet, so I figured that it was a good time as any to get revenge for what my dog-headed friend did to my stomach a good decade before.

So I introduced him to Terran cooking.

Niobians assimilate it all right, but their sense of taste isn't the same as ours. Our best dishes are just mush to their palates, which are conditioned to sauces that would make the most confirmed spice lover on Earth run screaming for the water tap. They have a sense of the delicate, too, but it needs to be stimulated with something like liquid fire before they can appreciate it. For instance, Kron liked Earth peaches, but he spiced them with horseradish and red pepper.

I must admit that he was a good sport. He took the hors d'oeuvres in stride, swallowing such tasteless things as caviar, Roquefort and anchovy paste without so much as a grimace. Of course, I was taking an unfair advantage of Kron’s natural courtesy, but it didn't bother me too much. He had rubbed that vorkum episode in for years. It was nice to watch him squirm.

When I pressed him to try an oyster cocktail, I figured things had gone far enough.

He took it, of course, even though anyone who knew Niobians could see that he didn't want any part of it. There was a pleading look in his eye that I couldn't ignore. After all, Kron was a friend. I was actually about to stop him when he pulled an oyster from its red bath and popped it into his mouth. There was a 'you'll be sorry' look on his face. I gestured to a waiter to remove the cocktail as he bit into the oyster, figuring, somewhat belatedly, that I had gone too far.

The grateful look I got from him was sufficient reward. But then it happened. Kron stopped looking grateful and literally snatched the cocktail back from the startled waiter!

He looked at me with an expression of disgust. "The first decent food thus far," he said, "and you attempt to
send it away!"

"Huh?" I exclaimed stupidly. "I didn't want to make you miserable."

"Miserable! Hah! This dish is wonderful! What in the name of my First Ancestor is it?" His pleased grin was
enough like a snarl to make Hartmann cringe in his chair. Since Kron and I were both speaking Niobian rather
than Confed, he didn't understand what was happening. I suppose he thought that Kron was about to rip my throat out. It
was a natural error, of course. You've seen a dog smile, and wondered what was going on behind the teeth? Well,
Kron looked something like that. A Niobian with his dog-headed humanoid body is impressive under any
conditions. When he smiles he can be downright frightening.

I winked at Hartmann. "Don't worry, sir," I said. "Everything's all right."

"It certainly is," Kron said in Confed. "This dish is delicious. Incidentally, friend Lanceford, what is it? It tastes
something like our Komal, but with a subtle difference of flavor that is indescribable!"

"It's called an oyster cocktail, Kron," I said.

"This is a product of your world we would enjoy!" Kron said. "Although the sauce is somewhat mild, the flavor
of the meat is exquisite!" He closed his eyes, savoring the taste. "It would be somewhat better with vanka," he said
musingly. "Or perhaps with Kala berries."

I shuddered. I had tried those sauces once. Once was enough! I could still feel the fire.

"I wonder if you could ship them to us," Kron continued.

Hartmann's ears pricked up at the word "ship." It looked like an opening gambit for a fast sales talk on behalf of
interstellar trade, a subject dear to his heart.

But I was puzzled. I couldn't figure it out until I tried one of the oysters--after which I knew! Some fool had
dished them up in straight tobasco sauce! It took some time before I could talk, what with trying to wash the fire out
of my mouth, and during the conversational hiatus Hartmann picked up the ball where I dropped it. So I sat by and
listened, my burned mouth being in no condition for use.

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"I'm afraid that we couldn't ship them," Hartmann said. "At least not on a commercial basis. Interstellar freight
costs are prohibitive where food is concerned."

Kron nodded sadly. He passed the oysters to Tovan Harl, his fellow First Councilor. Harl went through the
same reaction pattern Kron had shown.

"However," Hartmann continued, "we could send you a few dozen. Perhaps you could start a small oyster
farm."

"Is this a plant?" Kron asked curiously.

"No, it's a marine animal with a hard outer shell."

"Just like our Komal. We could try planting some of them in our oceans. If they grow, we will be very obliged
to you Terrans for giving us a new taste sensation."

"Since my tribe is a seafaring one," Harl interjected, "they can be raised under my supervision until we find the
exact methods to propagate them in our seas."

Hartmann must have been happy to get off the hook. It was a small request, one that was easy to fulfill. It was a
good thing that the Niobians didn't realize what concessions they could wring from the BIT. The Confederation had
sunk billions into Niobe and was prepared to sink many more if necessary. They would go to almost any lengths to
keep the natives happy. If that meant star-freighter loads of oysters, then it would be star-freighter loads of oysters.
The Confederation needed the gerontin that grew on Niobe.

The commercial worlds needed the anti-aging drug more and more as the exploration of space continued--not
to mention the popular demand. Niobe was an ideal herbarium for growing the swampland plant from which the
complex of alkaloids was extracted.

So Hartmann made a note of it, and the subject was dropped.

I didn't think anything more about it. Kron was happy, Harl was happy, and Hartmann was feeling pleased with
himself. There was no reason to keep the oyster question alive.

But it didn't die there. By some sort of telepathy the Niobians scattered along the long tables found out what
had been getting talked about at the upper end.

By this time I was on the ball again. When the orders went in I slipped a note to the cooks to use tabasco or
vanaka on the Niobian orders. It was fortunate that there was an ample supply of oysters available, because the
banquet dissolved shortly thereafter into an outright oyster feed. The Niobians dropped all pretense. They wanted
oysters--with vanaka, with tabasco or with Kala berries. The more effete Earth preparations didn't rouse the slightest
enthusiasm, but the bivalve found its place in the hearts and stomachs of the natives. The oysters ultimately ran out,
but one thing was certain. There was a definite bond of affection between our two utterly dissimilar species.

The era of good feeling persisted for several hours. There was no more quiet undertone of polite suffering
among our guests. They were enjoying themselves. The Agreement was signed with hardly an exception being taken
to its clauses and wording.

Niobe became a full member of the Confederation, with sovereign planetary rights, and the viscaya concentrate
began flowing aboard the ships waiting at the polar bases.

A day later I got orders to start winding up the BEE's installations on Niobe. The consular service would take
over after I had finished....

Lanceford looked at his watch. "Well, we're going to have time. It looks like they'll be late. Want to hear the
rest of it?"

"Naturally," Perkins said. "I certainly wouldn't want you to stop here."

"Well," Lanceford continued, "the next four years weren't much."

We spent most of the time closing down the outpost and regional installations, but it took longer than I
expected what with the difficulty in getting shipping space to move anything but viscaya concentrate off the planet.
Of course, like any of the Confederation bureaus, the BEE died hard. With one thing and another, there were still a
lot of our old people left. We still had the three main bases on the continental land masses in operating condition,
plus a few regional experiment stations on Alpha Continent and the Marine Biology Labs on Varnel Island. I'd just
closed the last regional stations on Beta and Gamma when Heinz Bergdorf paid me an official call.

Heinz was the senior biologist on Varnel. He was a good looking lad of Teutonic ancestry, one of those big
blond kids who fool you. He didn't look like a scientist, but his skull held more knowledge of Niobe's oceans than
was good for a man. He would have to unlearn a lot of it before he took his next job, or so I thought at the time.

Anyway, Heinz came into my office looking like someone had stolen his favorite fishnet. The expression of
Olympian gloom on his beak-nosed face would have done credit to Zeus. It didn't take any great amount of brains to
see that Heinz was worried. It stuck out all over him. He draped himself limply in the chair beside my desk.

"We've got troubles, Chief," he announced.

I grinned at him. I knew perfectly well why he was here. Something had come up that was too big for him to
handle. That was Heinz's only fault, a belief in the omnipotence of higher authority. If he couldn't handle it, it was a
certainty that I could—even though I knew nothing of either his specialty or his problems. However, I liked the man.
I did my best to give him the fatherly advice he occasionally needed, although he would have been better off half the
time if he hadn't taken it.

"Well, what's the trouble now?" I asked. "From the look on your face it must be unpleasant. Or maybe you're
just suffering from indigestion."

"It's not indigestion, Chief."

"Well, don't keep me in suspense. Tell me so I can worry too."

I didn't like the way he looked. Of course, I'd been expecting trouble for the past year. Things had been going
far too smoothly.

"Oysters!" Bergdorf said laconically.

"Oysters?"

I looked at him incredulously. Bergdorf sat straight up in his chair and faced me. There was no humor in his
eyes. "For God's sake! You frightened me for a moment. You're joking, I hope."

"Far from it," Bergdorf replied. "I said oysters and I mean oysters. It's no joke! Just who was the unutterable
idiot who planted them here?"

It took a minute before I remembered. "Hartmann," I said. "Of the BIT. He ordered them delivered at the
request of Kron Avar and Tovan Harl. I suppose Harl planted them. I never paid very much attention to it."

"You should have. It would have been better if they had imported Bengal tigers! How long ago did this infernal
insanity happen?"

"Right after the Agreement was signed, I guess. I'm sure it was no earlier than that, because Niobians met up
with oysters for the first time at that affair. I still didn't get it, but there was no doubt that Heinz was serious. I tried
to remember something about oysters, but other than the fact that they were good to eat and produced pearls I could
think of nothing. Yet Bergdorf looked like the end of the world was at hand. There was something here that didn't
add up. "Well, get on with it," I said. "As far as marine biology is concerned I'm as innocent as a Lyranian virgin.
Tell me--what's wrong with the oysters?"

"Nothing! That's the trouble. They're nice healthy specimens of terrestrial Ostrea lurida. We found a floating
limb with about a dozen spat clinging to it."

"Spat?"

"Immature oysters."
"Oh. Is that bad?"
"Sure it's bad. I suppose I'd better explain," Bergdorf said. "On Earth an oyster wouldn't be anything to worry about, even though it produces somewhere between sixteen and sixty million fertile eggs every year. On Earth this tremendous fertility is necessary for survival, but here on Niobe where there are no natural enemies to speak of, it's absolutely deadly!

"Just take these dozen spat we found. Year after next, they'd be breeding size, and would produce about three hundred million larvae. If everything went right, some three years later those three hundred million would produce nine thousand trillion baby oysters! Can you image how much territory nine thousand trillion oysters would cover?"

I stopped listening right then, and started looking at the map of Niobe pinned on the wall. "Good Lord! They'd cover the whole eastern seaboard of Alpha from pole to pole."

Bergdorf said smugly, "Actually, you're a bit over on your guess. Considering the short free swimming stage of the larvae, the slow eastern seaboard currents, poor bottom conditions and overcrowding, I doubt if they would cover more than a thousand miles of coastline by the fourth year. Most of them would die from environmental pressures.

"But that isn't the real trouble. Niobe's oceans aren't like Earth's. They're shallow. It's a rare spot that's over forty fathoms deep. As a result, oysters can grow almost anywhere. And that's what'll happen if they aren't stopped. Inside of two decades they'll destroy this world!"

"You're being an alarmist," I said.

"Not so much as you might think. I don't suppose that the oysters will invade dry land and chase the natives from one rain puddle to another, but they'll grow without check, build oyster reefs that'll menace navigation, change the chemical composition of Niobe's oceans, pollute the water with organic debris of their rotting bodies, and so change the ecological environment of this world that only the hardiest and most adaptable life forms will be able to survive this!"

"But they'll be self-limiting," I protested.

"Sure. But by the time they limit themselves, they will eliminate about everything else."

"If you're right, then, there's only one thing to do. We'll have to let the natives know what the score is and start taking steps to get rid of them."

"Oh, I'm right. I don't think you'll find anyone who'll disagree with me. We kicked this around at the Lab for quite a spell before I came up here with it."

"Then you've undoubtedly thought of some way to get rid of them."

"Of course. That was one of the first things we did. The answer's obvious."

"Not to me."

"Sure. Starfish. They'll swamp up the extra oysters in jig time."

"But won't the starfish get too numerous?"

"No. They die off pretty fast without a source of food supply. From what we can find out about Niobe's oceans, there is virtually no acceptable food for starfish other than oysters and some microscopic animal life that wouldn't sustain an adult."

"Okay, I believe you. But you still leave me cold. I can't remember anything about a starfish that would help him break an oyster shell."

Bergdorf grinned. "I see you need a course in marine biology. Here's a thumbnail sketch. First, let's take the oyster. He has a big muscle called an adductor that closes his shell. For a while he can exert a terrific pull, but a steady tension of about nine hundred grams tires him out after an hour or so. Then the muscle relaxes and the shell gapes open. Now the starfish can exert about thirteen hundred grams of tension with his sucker-like tube feet, and since he has so many of them he doesn't have to use them all at one time. So, by shifting feet as they get tired, he can exert this pull indefinitely.

"The starfish climbs up on the oyster shell, attaches a few dozen tube feet to the outside of each valve and starts to pull. After a while the oyster gets tired, the shell opens up, and the starfish pushes its stomach out through its mouth opening, wraps the stomach around the soft parts of the oyster and digests it right in the shell!"

I shuddered.

"Gruesome, isn't it?" Bergdorf asked happily. "But it's nothing to worry about. Starfish have been eating oysters on the half shell for millions of years. In fact I'll bet that a starfish eats more oysters in its lifetime than does the most confirmed oyster-addict."

"It's not the fact that they eat them," I said feebly. "It's the way they do it. It makes me ill!"

"Why should it? After all a starfish and a human being have a lot in common. Like them, you have eaten oysters on the half shell, and they're usually alive when you gulp them down. I can't see where our digestive juices are any easier on the oyster than those of a starfish."
"Remind me never to eat another raw oyster," I said. "On second thought you won't have to. You've ruined my
appetite for them forever."

Bergdorf chuckled.

"Well, now that you've disposed of one of my eating habits," I said bitterly, "let's get back to the problem. I
presume that you'll have to find where the oysters are before you start in working them over with starfish."

"You've hit the reason why I'm here. That's the big problem. I want to find their source."

"Don't you know?"

"I can make a pretty good guess. You see, we picked this limb out of the Equatorial current. As you know,
Varnel Island is situated right at the western termination of the current. We don't get much littoral stuff unless it
comes from the Islands or West Beta. And as far as I can figure the islands are the best bet. These spat probably
came from the Piralones, that island group in the middle of the current about halfway across."

I nodded. "It would be a good bet. They're uninhabited. If Harl wanted an isolated spot to conduct oyster
planting experiments, I couldn't think of a better location. Nobody in his right mind would visit that place willingly.
The islands support the damnedest assortment of siths you ever saw."

"If that's where it is," Bergdorf said, "we can thank heaven for the natives' suspicious nature. That location may
help us save this world!"

I laughed at him. "Don't be so grim, Heinz--or so godlike. We're not going to save any worlds."

"Someone has to save them."

"We don't qualify. What we'll do is chase this business down. We'll find out where the oysters come from, get
an idea of how bad things are and then let the Niobians know about it. If anyone is going to save this planet it won't
be a bunch of Confederation exploration specialists."

Bergdorf sighed. "You're right, of course."

I slapped him on the shoulder. "Cheer up, Heinz." I turned to my appointment calendar and checked it over.
There was nothing on it that couldn't wait a few days. "I need a vacation from this place. We'll take my atomic job and go oyster hunting. It ought to be fun."

Bergdorf's grin was like a sunrise on Kardon.

* * * * *

I brought the 'copter down slowly through the overcast, feeling my way cautiously down to the ground that
radar told me was somewhere below. We were hardly a hundred and fifty meters up before it became visible through
the drenching tropic rain. Unless you've seen it you can't imagine what rain is really like until you've been in the
Niobian tropics. It literally swamps everything, including visibility.

It was the Piralones all right.

The last time I'd seen them was when I led the rescue party that pulled Wilson Chung and his passengers out of
the Baril Ocean, but they were still the same, tiny deserted spots of land surrounded by coral reefs. We were over the
biggest one of the group, a rounded hummock barely a kilometer in diameter, surrounded by a barrier reef of coral.
Between the reef and the island a shallow lagoon lay in sullen grayness, its surface broken into innumerable tiny
wavelets by the continual splash of rain. The land itself was a solid mass of olive-green vegetation that ended
abruptly at a narrow beach.

"Well, we're here," I said. "Grim looking place, isn't it?"

"Whoever spoke of the beauties of tropical islands didn't have Niobe in mind," Bergdorf agreed. "This place
looks like something left behind by a cow."

I couldn't help the chuckle. The simile was too close for comfort. I tilted the rotors and we went down to hover
about ten meters off the beach. Bergdorf pointed down the beach. I headed the 'copter in that direction as Bergdorf
looked out of the bubble, intently scanning the waters of the lagoon. Finally he looked up with an expression of
understanding on his lean face.

"No wonder I missed them!" he murmured with awe. "There are so many that there's no floor of the lagoon to
spot them against. They cover the entire bottom! You might as well set her down here; it's as good a place as any."

I throttled back and landed the whirlybird on the beach. "You had your quota of vorkum?" I asked as Bergdorf
reached for the door handle.

The biologist made a wry face. "Naturally. You think I'd be fool enough to go outside without it?"

"I wouldn't know. All I'm sure of is that if you're going to get out here, you'd better be loaded." I followed after
him as he opened the door and jumped down to the ground.

A small horde of siths instantly left the cover of the jungle and buzzed out to investigate. A few years ago, that
would have been the signal for ray beams at fan aperture, but both Bergdorf and I ignored them, trusting in the
protection of the vorkum. The beasties made a tactical pass at Heinz, thought the better of it and came wheeling over
in my direction. I could almost see the disappointed look in their eyes as they caught my aura, put on the brakes and
returned disappointed to their shelter under the broadleaves. Whatever vorkum did, it certainly convinced insects
that we were inedible and antisocial.

One or two ventured back and buzzed hopefully around our heads before giving up in disgust.

"It beats me what they live on," Bergdorf said, gesturing at the iridescent flash of the last bloodsucker as it
disappeared beneath the broadleaves.

"As long as it isn't us, I don't give a damn," I said. "Maybe they live on decaying vegetable matter until
something live and bloody comes along. Anyway, they seem to get along."

Bergdorf walked the few steps to the water's edge. "I won't even have to go swimming," he said as he walked
into the water a few steps, bent and came up with what looked like a handful of rocks.

"Oysters?" I asked, turning one over in my hand.

"Yep. Nice little O. lurida. About three years old, I'd guess, and just ripe for breeding. You know, I've never
seen them growing so close to the shore. They must be stacked on top of each other out there a ways. There's
probably millions of them in this lagoon alone!"

"Well, we've found where they're coming from. Now all that's left is to figure out what to do about it."

"We'd still better check Beta. They might possibly have reached there."

"Not unless someone's planted them," I said. "You're forgetting the ocean currents."

"No. I was thinking of planted areas."

"Well, think again. You may know your biology, but I know Niobians. They're too suspicious to bring untried
things too close to where they live. They've been that way as long as I can remember them, and I don't think that
anything--even something as delightful as an oyster--would make them change overnight."

"I hope you're right."

"Oh, we'll check Beta, all right," I said. "But you can send a couple of your boys to do it. There's no sense in
our wasting time with it."

I heard the noise behind us before Bergdorf did. We turned in time to see four Niobians emerge from the jungle
and glide purposefully toward us. The tribal tattoos on their chests identified them as members of Tovan Harl's
commune. I nudged Heinz and murmured, "We've got company."

The natives approached to within a few paces. They stood politely to leeward while one of their number
approached. "I'm sorry," he said without the normal introduction, "but this is leased land. You will have to leave at
once. And you will please return the oysters to the lagoon. It is not permitted to remove them."

"Oh, all right," I said. "We're through here anyway. We'll visit the other islands and then be off."

"The other islands are also leased property. When you leave I will radio the other guards, and you will not be
permitted to land."

"This is not according to your customs," I protested.

"I realize that, Mr. Lanceford," the native said. "But I have given oath to keep all trespassers out."

I nodded. It wasn't usual. I wondered what Harl had in mind--possibly a planetary monopoly. If that was his
plan, he was due for a surprise.

"That's very commendable," Bergdorf said, "but these oysters are going with me. They are needed as evidence."

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"That's very commendable," Bergdorf said, "but these oysters are going with me. They are needed as evidence."

"I'm sorry, sir," the native said. "The oysters stay here."

"Don't be a fool, Heinz," I interjected. "They're in the right. The oysters are their property. If you try to take
them you'll be in trouble up to your ears."

"But I need those oysters, Arthur! Probably the only adult oyster tissue on Niobe is on these islands. I need a
sample of it."

"Well, it's your neck," I turned to the native. "Don't be too hard on him," I said. "He's quite an important man."

The Niobian nodded and grinned. "Don't worry, sir. He won't feel a thing. But I really wish to apologize for our
rudeness. If conditions were different--"

He paused and turned toward Bergdorf who was climbing into the 'copter with the oysters still in his hand.

* * * * *

I wasn't surprised that he didn't make it. In fact, I'd have been more surprised if he had. Heinz crumpled to the
ground beside the ship. One of the natives came forward, took the oysters from his limp hand and threw them back
into the lagoon.

"All right," I said to the spokesman. "You fellows clobbered him, so now you can get him into the ship."

"That is only fair," the native said. "We do not want to cause you any extra inconvenience." He gestured to his
companions. Between them they got Bergdorf's limp body into the ship and strapped into one of the seats. They got
out, I got in, and in a minute the two of us got out of there, going straight up through to overcast to get a celestial
bearing for home.

I kept looking at Bergdorf's limp body and grinning.
It was nearly an hour later before Bergdorf woke up. "What hit me?" he asked fuzzily.
"Subsonics," I said. "They should have scared you to death."
"I fainted?"
"Sure you did. You couldn't help it. They hit like a ton of brick."
"They certainly do," he said ruefully.
"They can kill," I said. "I've seen them do it. The Niobians generate them naturally, and they can focus them fairly well. Probably this quality was one of their forms of defense against predators in their early days. It's a survival trait; and when there are enough natives present to augment the impulses they can be downright nasty."

Bergdorf nodded. "I know," he said. He stopped talking and looked out over the sun-drenched top of the overcast. "It looks like Tovan Harl wants to keep this oyster farm a private matter. In a way he's doing us a favor, but I'd still feel happier if I had one or two of those oysters."
"Why do you need them?"
"Well, I figured on getting a couple of the Navy's organic detectors and setting them for oyster protoplasm. You know how sensitive those gadgets are. There might be a small but significant change in oyster protoplasm since it has arrived here."
"Well, you don't need to worry," I said. "I put one of your pets in my pocket before the natives showed up, so you've got what you need." I pulled the oyster out and handed it to him. It didn't look any the worse for its recent rough treatment.
Bergdorf grinned. "I knew I could trust you, Chief. You're sneaky!"
I laughed at him.

* * * * *

We arrived back at Alpha without trouble. I shooed Bergdorf back to Varnel with the one oyster and a promise that I'd back him up in any requisitions he cared to make. After that I checked up on the BEE business I had neglected for the past couple of days and, finally, late that night took one of the Base's floaters and drove slowly down the trail to Kron's village.

While Earth-style civilization had done much to improve transport and communication on Niobe, it hadn't--and still hasn't--produced a highway that can stand up to the climate. Roads simply disappear in the bottomless mud. So whatever vehicular transport exists on Niobe is in the form of floaters, whose big sausage-shaped tires give enough flotation to stay on top of the ooze, and sufficient traction to move through the morass that is Niobe's surface. They're clumsy, slow and hard to steer. But they get you there--which is something you can't say about other vehicles.

Kron's village had changed somewhat since I first visited it. The industrial section was new. The serried ranks of low dural buildings gleamed metallically in the glare of the floater's lights, glistening with the sheets of water that ran from their roofs and sides. The power-broadcast station that stood in the center of the village hadn't been there either. But other than that everything was pretty much the same as it always had been, an open space in the jungle filled with stone-walled, thatch-roofed houses squatting gloomily in the endless rain.

The industry, such as it was, was concentrated solely upon the production of viscaya concentrate. It had made little difference in the Niobian way of life, which was exactly as the natives wanted it.

It was odd, I reflected, how little change had taken place in Niobian society despite better than two decades of exposure to Confederation technology. Actually, the Confederation could leave tomorrow, and would hardly be missed. There would be no cultural vacuum. The strangers would simply be gone. Possibly some of our artifacts would be used. The atomic power-broadcast station would possibly stay, and so would the high-powered radio. Perhaps some of the gadgetry the natives had acquired from us would be used until it was worn out, but the pattern of the old ways would stay pretty much as it had always been. For Niobian culture was primarily philosophical rather than technological, and it preferred to remain that way.

I parked my floater beside the house that had sheltered Kron as long as I had known him. I entered without announcing myself.

As an old friend I had this privilege, although I seldom used it. But if I had come formally there would have been an endless rigmarole of social convention that would have had to be satisfied before we could get down to business. I didn't want to waste the time.

* * * * *

Kron was seated behind a surprisingly modern desk, reading a book by the light of a Confederation glowtube. I looked at its title--The Analects of Confucius--and blinked. I'd heard of it. It and Machiavelli's Prince are classics on governmental personality and philosophy, but I had never read it. Yet here, hundreds of light years from the home world, this naked alien was reading and obviously enjoying that ancient work. It made me feel oddly ashamed of myself.
He looked up at me, nodded a greeting and laid the book down with a faint expression of regret on his doglike face. I found a chair and sat down silently. I wondered how he found time to read. My job with the BEE kept me busy every day of the 279-day year. And his, which was more important and exacting than mine, gave him time to read philosophy! I sighed. It was something I could never understand.

I waited for him to speak. As host, it was his duty to open the wall of silence which separated us.

"Greetings, friend Lanceford," Kron said. "My eyes are happy with the pleasure of beholding you." He spoke in the ancient Niobian formula of hospitality. But he made it sound as though he really meant it.

"It's a double joy to behold the face of my friend and to hear his voice," I replied in the same language. Then I switched to Confed for the business I had in mind. Their polite forms are far too clumsy and uncomfortable for business use; it takes half a day to get an idea across. "It seems as though I'm always coming to you with trouble," I began.

"What now?" Kron asked. "Every time I see you, I hope that we can relax and enjoy our friendship, but every time you are burdened. Are you Earthmen forever filled with troubles or does my world provoke them?" He smiled at me.

"A little of both, I suppose," I said.

Kron hummed--the Niobian equivalent of laughter. "I've been observing you Earthmen for the past twenty years, and I have yet to see one of you completely relaxed. You take yourselves much too seriously. After all, my friend, life is short at best. We should enjoy some of it. Now tell me your troubles, and perhaps there is no cause to worry."

"You're wrong, Kron. There is plenty of cause to worry. This can affect the well-being of everything on this world."

Kron's face sharpened into lines of interest. "Continue, friend Lanceford."

"It's those oysters the BIT sent you a few years ago. They're getting out of hand."

Kron hummed. "I was afraid that it--"

"---was something serious!" I finished. "That's what I told Heinz Bergdorf when he came to me with this story. Now sober down and listen! This is serious!"

* * * * *

"It sounds pretty grim," Kron said after I had finished. "But how is it that your people didn't foresee the danger? Something as viciously reproductive as the oyster should be common knowledge."

"Not on our world. You see, the study of sea life is a specialized science on Earth. It is one of the faults of our technological civilization that almost everyone must specialize from the time he enters secondary school. Unless one specializes in marine biology, one generally knows little or nothing about it."

"Odd. Very odd. But then, you Earthmen always were a peculiar race. Now, if I heard you right, I believe that you said there is an animal on your world which preys upon these oysters. A starfish?"

"Yes."

"Won't this animal be as destructive as the oyster?"

"Bergdorf doesn't think so, and I trust his judgment."

"Won't this animal also kill our Komal? They are like these oysters of yours in a way."

"But they burrow, and the starfish doesn't. They'll be safe enough."

Kron sighed. "I knew that association with you people would prove to be a mixed blessing." He shrugged his shoulders and turned his chair to his desk. A Niobian face appeared on the screen. "Call a Council meeting and let me know when it is ready," Kron ordered.

"Yes, Councilor," the face replied.

"Well, that's that. Now we can relax until the Council manages to get together."

"How long will that take?"

"I haven't the least idea," Kron said. "Several days--several weeks. It all depends upon how soon we can get enough Council members together to conduct business."

I said unhappily, "I'd like to have your outlook but we're fighting against time!"

"You Earthmen pick the most impossible opponents. You should learn to work with time rather than against it."

He pulled at one ear reflectively. "You know, it is strange that your race could produce ethical philosophers like this one." He tapped the Analects with a webbed forefinger. "Such contrast of thought on a single world is almost incredible!"

"You haven't seen the half of it!" I chuckled. "But I'm inclined to agree with you. Earth is an incredible world."

* * * * *

Fortunately there was a battle cruiser in the Polar spaceport on a goodwill mission. We had no trouble about getting the detectors Bergdorf needed, plus a crew to run them. The Navy is co-operative about such things, and
every officer knows the importance of the BEE on a planetary operation. We could have had the entire cruiser if we had wanted it.

A week later the four Marine Lab ships, each equipped with a detector, started a search of Niobe’s oceans. Their atomic powerplants could drive them along at a respectable speed. Bergdorf and I expected a preliminary report within a month.

We weren't disappointed.

The results were shocking, but not unexpected. Preliminary search revealed no oysters in the other two major oceans, but the Baril Ocean was badly infested. There were groups and islands of immature oysters along the entire course of the Equatorial current and the tropical coast of Alpha. Practically every island group in the central part of the ocean showed traces of the bivalves. It was amazing how far they had spread. Even the northern shallows had a number of thriving young colonies.

Bergdorf was right. Another year and we'd have been swamped. As it was it was nothing to laugh about.

The news reached Kron just before the Council meeting, which, like most of Niobe's off-season politics, had been delayed time after time. Since a Council meeting requires an attendance of ninety per cent of the Council, it had been nearly impossible to schedule an assembly where a quorum could be present. But our news broadcasts over the BEE radio reached every corner of the planet, and the note of urgency in them finally produced results.

The Niobians held the emergency session at Base Alpha, where our radio could carry the proceedings to the entire planet. Whatever else they may be, Niobian government sessions are open to the public. Since the advent of radio, practically the entire public listens in.

Like the natives, I listened too. I wasn't surprised when Kron appeared in my office, his eyes red and swollen from lack of sleep, but with a big grin on his face that exposed his sharp sectorial teeth. "Well, that's over, friend Lanceford. Now send us your starfish."

"That's easier said than done," I replied gloomily. "I've contacted the Confederation. They won't ship twenty pounds of starfish--let alone the twenty thousand tons Bergdorf says we'll need!"

"Why not? Are they crazy? Or do they want to destroy us?"

"Neither. This is just a sample of bureaucracy at work. You see, the starfish is classed as a pest on Earth. Confederation regulations forbid the exportation of pests to member planets."

"But we need them!"

"I realize that, but the fact hasn't penetrated to the highest brass." I laughed humorlessly. "The big boys simply can't see it. By the time we marshal enough evidence to convince them, it will be too late. Knowing how Administration operates, I'd say that it'd take at least a year for them to become convinced. And another two months for them to act."

"But we simply can't wait that long! Your man Bergdorf has convinced me. We're in deadly danger!"

"You're going to have to wait," I said grimly. "Unless you can find some way to jar them out of their rut."

Kron looked thoughtful. "I think that can be done, friend Lanceford. As I recall, your bureaus are timid things. Furthermore, we have something they want pretty bad. I think we can apply pressure."

"But won't your people object? Doesn't that deny your basic philosophy of non-interference with others?"

Kron grinned ferociously. "Not at all. Like others of your race, you have never understood the real significance of our social philosophy. What it actually boils down to is simply this--we respect the customs and desires of others but require in turn that they respect ours."

"You mean that you will use force against the rest of the Confederation? But you can't do that! You wouldn't stand a chance against the Navy."

"We will first try a method we have used with our own tribes who get out of line. I don't think anything more will be necessary." Kron's voice was flat. "It goes against the grain to do this, but we are left no choice." He turned and left the room without a farewell, which was a measure of his agitation.

I sat there behind my desk wondering what the Niobians could do. Like my ex-boss Alvord Sims, I had a healthy respect for them. It just could be that they could do plenty.

They could.

* * * * *

Organization! Man, you've never seen anything like what the Niobians tossed at our startled heads! We always thought the Planetary Council was a loose and ineffective sort of thing, but what happened within the next twenty hours had to be seen to be believed. I saw it. But it was days before I believed it.

Within a day the natives had whipped up an organization, agreed on a plan of action and put it into effect. By noon of the next day Niobe was a closed planet. A message was sent to the Confederation informing them that Niobe was withdrawing until the emergency was over. An embargo was placed on all movement of shipping. And everything stopped.
No factories operated. The big starfreighters stood idle and empty at the polar bases. Not one ounce of gerontin or its concentrate precursor left Niobe. Smiling groups of Niobians, using subsonics to enforce their demands, paralyzed everything the Confederation had operated on the planet. No one was hurt. The natives were still polite and friendly. But Confederation business came to an abrupt halt, and stayed halted.

It was utterly amazing! I had never heard of a planet-wide boycott before. But Niobe was entirely within her rights. The Confederation had to accept it.

And, of course, the Confederation capitulated. If the Niobians were fools enough to want pests as a condition of resuming viscaya shipments--well, it was their affair. The Confederation needed viscaya. It was willing to do almost anything to assure its continued supply.

With the full power of the Confederation turned to giving Niobe what she wanted, it wasn't long before the oysters were under control. We established a systematic seeding procedure for the starfish that kept arriving by the freighter load. In a few months Bergdorf reported that an ecological balance had been achieved.

"But didn't the starfish create another pest problem?" Perkins asked.
"Not at all," Lanceford said. "I told you that the Niobians had an odd sense of taste. Starfish proved to be quite acceptable to the Niobian palate. They merely added another item to Niobe's food supply."

Perkins shuddered delicately. "I wouldn't eat one of those things in a million years."

"You're going to have to eat vorkum if you expect to survive on this world. Compared to vorkum, a starfish is sheer pleasure! But that wasn't the end of it," Lanceford added with a smile. "You see, shortly after things had simmered down to normal Kron dropped into my office.

"'I think, friend Lanceford,' he said, 'that we are going to have to create a permanent organization to keep unwanted visitors out. This little affair has been a needed lesson. I have been reading about your planetary organization, and I think a thing like your Customs Service is vitally needed on our world to prevent future undesirable biological importations.'"

"I agree," I replied. 'Anything that would prevent a repetition of this business would be advisable.'

"So that was how the Customs Service started. The insigné you will recognize as a starfish opening an oyster. Unfortunately the Niobians are quite literal minded. When they say any biological importation will be quarantined and examined, they mean Confederation citizens too!

"And that, of course, was the entering wedge. You'll find things quite homelike once you get out of here. The natives have developed an organization that's a virtual copy of our Administrative Branch. Customs, as you know, is a triumph of the bureaucratic system, and naturally the idea spread. Once the natives got used to a permanent government organization that was available at all times, it was only a question of time before the haphazard tribal organization became replaced by a planetary union. You could almost say that it was an inevitable consequence."

Lanceford grinned. "The Niobians didn't realize that the importation of foreign Customs was almost as bad as the importation of foreign animals!" He chuckled at the unconscious pun.
The outcasts; the hunted of all the brighter worlds, crowded onto Yaroto. But even here was there salvation for Ransome, the jinx-scarred acolyte, when tonight was the night of Bani-tai ... the night of expiation by the photo-memoried priests of dark Darion?

The last light in the Galaxy was a torch. High in the rafters of Mytor's Cafe Yaroto it burned, and its red glare illuminated a gallery of the damned. Hands that were never far from blaster or knife; eyes that picked a hundred private hells out of the swirling smoke where a woman danced.

She was good to look at, moving in time to the savage rhythm of the music. The single garment she wore bared her supple body, and thighs and breasts and a cloud of dark hair wove a pattern of desire in the close room.

Fat Mytor watched, and his little crafty eyes gleamed. The Earth-girl danced like a she-devil tonight. The tables were crowded with the outcast and the hunted of all the brighter worlds. The woman's warm body, moving in the torchlight, would stir memories that men had thought they left light years behind. Gold coins would shower into Mytor's palm for bad wine, for stupor and forgetfulness.

Mytor sipped his imported amber kali, and the black eyes moved with seeming casualness, penetrating the deep shadows where the tables were, resting briefly on each drunken, greedy or fear-ridden face.

It was an old process with Mytor, nearly automatic. A glance told him enough, the state of a man's mind and senses and wallet. This trembling wreck, staring at the woman and nursing a glass of the cheapest green Yarotian wine, had spent his last silver. Mytor would have him thrown out. Another, head down and muttering over a tumbler of raw whiskey, would pass out before the night was over, and wake in an alley blocks away, with his gold in Mytor's pocket. A third wanted a woman, and Mytor knew what kind of a woman.

When the dance was nearly over Mytor heaved out of his chair, drew the rich folds of his native Venusian tarab about his bulk, and padded softly to a corner of the room, where the shadows lay deepest. Smiling, he rested a moist, jeweled paw on the table at which Ransome, the Earthman, sat alone.

"I've paid for my bottle and I have nothing left for you to steal. We have nothing in common, no business together. Now, if you don't mind, you're in my line of vision, and I'd like to watch the finish of the dance."

The fat Venrian's smile only broadened.

"May I sit down, Mr. Ransome?" he persisted. "Here, out of your line of vision?"

"The chair belongs to you," Ransome observed flatly.

"Thank you."

Covertly, as he had done for hours now, Mytor studied the gaunt, pale Earthman in the worn space harness. Ransome had apparently dismissed the Venrian renegade already, and his cold blue eyes followed the woman's every movement with fixed intensity.

The music swept on toward its climax and the woman's body was a storm of golden flesh and tossing black hair. Mytor saw the Earthman's pale lips twist in the faint suggestion of a bitter smile, saw the long fingers tighten around the glass.

Every man had his price on Yaroto, and Ransome would not be the first Mytor had bought with a woman. For a moment, Mytor watched the desire brighten in Ransome's eyes, studied the smile that some men wear on the way to death, in the last moment when life is most precious.

* * * * *

In this moment Ransome was for sale. And Mytor had a proposition.

"You were not surprised that I knew your name, Mr. Ransome?"

"Let's say that I wasn't interested."

Mytor flushed but Ransome was looking past him at the woman. The Venrian wiped his forehead with a soiled handkerchief, drummed fat fingers on the table for a moment, tried a different tack.

"Her name is Irene. She's lovely, isn't she, Mr. Ransome? Surely the inner worlds showed you nothing like her. The eyes, the red mouth, the breasts like--"

"Shut up," Ransome grated, and the glass shattered between his clenched fingers.

"Very well, Mr. Ransome." Whiskey trickled from the edge of the table in slow, thick drops, staining Mytor's white tarab. Ice was in the Venrian's voice. "Get out of my place--now. Leave the whiskey, and the woman. I have
no traffic with fools."

Ransome sighed.

"I've told you, Mytor that you're wasting your time. But make your pitch, if you must."

"Ah, Mr. Ransome, you do not care to go out into the starless night. Perhaps there are those who wait for you, eh? With very long knives?"

Reflex brought Ransome's hand up in a lightning arc to the blaster bolstered under his arm, but Mytor's damp hand was on his wrist, and Mytor's purr was in his ear, the words coming quickly.

"You would die where you sit, you fool. You would not live even to know the sharpness of the long knives, the sacred knives of Darion, with the incantations inscribed upon their blades against blasphemers of the Temple."

Ransome shuddered and was silent. He saw Mytor's guards, vigilant in the shadows, and his hand fell away from the blaster.

When the dance was ended, and the blood was running hot and strong in him, he turned to face Mytor. His voice was impatient now, but his meaning was shrouded in irony.

"Are you trying to sell me a lucky charm, Mytor?"

The Venusian laughed.

"Would you call a space ship a lucky charm, Mr. Ransome?"

"No," Ransome said grimly. "If it were berthed across the street I'd be dead before I got halfway to it."

"Not if I provided you with a guard of my men."

"Maybe not. But I wouldn't have picked you for a philanthropist, Mytor."

"There are no philanthropists on Yaroto, Mr. Ransome. I offer you escape, it is true; you will have guessed that I expect some service in return."

"Get to the point." Ransome's eyes were weary now that the woman's dancing no longer held them. And there was little hope in his voice.

A man can put off a date across ten years, and across a hundred worlds, and there can be whiskey and women to dance for him. But there was a ship with burned-out jets lying in the desert outside this crumbling city, and it was the night of Bani-tai, the night of expiation in distant Darion, and Ransome knew that for him, this was the last world.

After tonight the priests would proclaim the start of a new Cycle, and the old debts, if still unpaid, would be canceled forever.

Ransome shrugged, a hopeless gesture. Enough of the cult of the Dark One lingered in the very stuff of his nerves and brain to tell him that the will of the Temple would be done.

But Mytor was speaking again, and Ransome listened in spite of himself.

"All the scum of the Galaxy wash up on Yaroto at last, and across a hundred worlds, and there can be whiskey and women to dance for him. But there was a ship with burned-out jets lying in the desert outside this crumbling city, and it was the night of Bani-tai, the night of expiation in distant Darion, and Ransome knew that for him, this was the last world.

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But Mytor was speaking again, and Ransome listened in spite of himself.

"All the scum of the Galaxy wash up on Yaroto at last," the fat Venusian said. "That is why you and I are here, Mr. Ransome. It is also why a certain pirate landed his ship on the desert out there three days ago. Callisto Queen, the ship's name is, though it has borne a dozen others. Cargo--Jovian silks and dyestuffs from the moons of Mars, narco-vin from the system of Alpha Centauri."

Mytor paused, put the tips of fat fingers together, and looked hard at Ransome.

"Is all of that supposed to mean something to me?" Ransome asked. A waiter had brought over a glass to replace the broken one, and he poured a drink for himself, not inviting Mytor. "It doesn't."

"It suggests a course, nothing more. In toward Sol, out to Yaroto by way of Alpha Centauri. Do you follow the courses of pirate ships, Mr. Ransome?"

"One," Ransome said savagely. "I've lost track of her."

"Perhaps you know the Callisto Queen better under her former name, then."

Again Ransome's hand moved toward the blaster, and this time Mytor made no attempt to stop him. Ransome's thin lips tightened with some powerful emotion, and he half rose to look hard at Mytor.

"The name of the ship?"

"Her captain used to call her Hawk of Darion."

Ransome understood. Hawk of Darion, hell ship driving through black space under the command of a man he had once sworn to kill. Eight years rolled back and he saw them together, laughing at him: the Earthman-captain and the woman who had been Ransome's.

"Captain Jareth," Ransome said slowly. "Here--on Yaroto."

The Venusian nodded, pushing the bottle toward Ransome. The Earthman ignored the gesture.

"Is the woman with him?"

Mytor smiled his feline smile. "You would like to see her blood run under the knives of the priests, no?"

"No."

Ransome meant it. Somewhere, in the years of flight, he had lost his love for the blonde, red-lipped Dura-ki,
and with it had gone his bitter hatred and his desire for revenge.

He jerked his mind back to the present, to Mytor.

"And if I told you that it must be her life or yours?" Mytor was asking him.

Ransome's eyes widened. He sensed that Mytor's last question was not, an idle one. He leaned forward and asked:

"How do you fit into this at all, Mytor?"

"Easily. Once, ten years ago, you and the woman now aboard the Hawk of Darion blasphemed together against the Temple of the Dark One, in Darion."

"Go on," Ransome said.

"When you landed here this afternoon the avenging priests were not far behind you."

"How did you--"

"I have many contacts," Mytor purred. "I find them invaluable. But you are growing impatient, Mr. Ransome. I will be brief. I have contracted with the priests of Darion to deliver you to them tonight for a considerable sum."

"How did you know you would find me?"

"I was given your description." He made a gesture that took in all the occupants of the torch-lit room. "So many of the hunted, and the haunted, come here to forget for an hour the things that pursue them. I was expecting you, Mr. Ransome."

"If there is a large sum of money involved, I'm sure you'll make every effort to carry out your part of the bargain," Ransome observed ironically.

"I am a businessman, it is true. But in my dealings with the master of the Hawk of Darion I have seen the woman and I have heard stories. It occurred to me that the priests would pay much more for the woman than they would for you, and it seemed to me that a message from you might coax her off the ship. After all, when one has been in love--"

"That's enough." Ransome had risen to his feet. "I wonder if I could kill you before your guards got to me."

"Are you then so in love with death, Ransome?" The Venusian spoke quickly. "Don't be a fool. It is a small thing, a woman's life--a woman who has betrayed you."

Ransome stood silent, his arm halfway to his blaster. The woman had begun to dance again in the red glare of the torch.

"There will be other women," the Venusian was murmuring. "The woman who dances now, I will give her to you, to take with you in your new ship."

Ransome looked slowly from the glowing body of the woman to the guards around the walls, down into Mytor's confident face. His arm dropped away from the blaster.

"Any man--for a price." The Venusian's murmur was lost in the blare of the music. Ransome had eased his lean body back into the chair.

* * * * *

The night air was cold against Ransome's cheek when he went out an hour later, surrounded by Mytor's men. Yaroto's greenish moon was overhead now, but its pale light did not help him to see more clearly. It only made shadows in every doorway and twisting alley.

Mytor's car was only a few feet away but before he could reach it he was shoved aside by one of the Venusian's guards. At the same moment the night flamed with the blue-yellow glare from a dozen blasters. Ransome raised his own weapon, staring into the shadows, seeking his attackers.

"That's our job. Get in," said one of the guards, wrenching open the car door.

Then the firing was over as suddenly as it had begun. The guards clustered at the opening of an alley down the street. Mytor's driver sat impassively in the front seat.

When the guards returned one of them thrust something at Ransome, something hard and cold. He glanced at it. A long knife.

There was no need to read the inscription on the hilt. He knew it by heart.

"Death to him who defileth the Bed of the Dark One. Life to the Temple and City of Darion."

Once Ransome would have pocketed the knife as a kind of grim keepsake. Now he only let it fall to the floor. In the brief, ghostly duel just over he had neither seen nor heard his attackers. That added, somehow, to the horror of the thing.

He shrugged off the thought, turning his mind to the details of the plan by which he would save his life.

It was quite simple. Ransome had been in space long enough to know where the crewmen went on a strange world. Half an hour later he sat with a gunner from the Hawk of Darion, in one of the gaudy pleasure houses clustered on the fringe of the city near the spaceport and the desert beyond.

"Will you take the note to the Captain's woman?"
The man squirmed, avoiding Ransome's ice-blue stare. "Captain killed the last man who looked at his woman," the gunner muttered sullenly. "Flogged him to death."

"I'm not asking you to look at her," Ransome reminded him.

The gunner sat looking at the stack of Mytor's money piled on the table before him. A woman drifted over. "Go away," Ransome said, without raising his eyes. He added another bill to the stack.

"Let me see the note before I take it," the gunner demanded.

"It would mean nothing to you." Ransome pushed a half-empty bottle toward the man, poured him out another drink.

The man's hands were trembling with inner conflict as he measured the killing lash against the stack of yellow Yarotian kiroons, and the pleasures it would buy him. He drank, dribbling a little of the wine down his grimy chin, and then returned to the subject of seeing the note, with drunken persistence.

"I got to see it first."

"It's in a language you wouldn't--"

"Let him see it," a new voice cut in. "Translate it for him, Mr. Ransome."

* * * * *

It was a woman's voice, cold and contemptuous. Ransome looked up quickly, and at first he didn't recognize her. The gunner never took his eyes from the stack of kiroons on the table.

"Let him see how a man murders a woman to save his own neck."

"You're supposed to be dancing at Mytor's place," Ransome said. "That's your business; this is mine."

He closed his hand over the gunner's wrist as the man reached convulsively for the money, menaced now by the angry woman.

"Half now, the rest later." Ransome's eyes burned into the crewman's. The latter looked away. Ransome tightened his grip, and pain contorted the gunner's features.

"Look at me," Ransome said. "If you cross me you'll wish you could die by flogging."

The woman Mytor had called Irene was still standing by the table when the gunner had left with the note and his money.

"Aren't you going to ask me to sit down?"

"Certainly. Sit down."

"I'd like a drink."

She sipped her wine in silence and Ransome studied her by the flickering light of the candle burning on the table between them.

She wore a simple street dress now, in contrast to the gaudy, revealing garments of the pleasure house women. The beauty of her soft, unpainted lips, her golden skin and wide-set green eyes was more striking now, seen at close range, than it had been in the smoky cavern of Mytor's place.

"What are you thinking now, Ransome?"

The question was unexpected, and Ransome answered without forethought: "The Temple."

"You studied for the priesthood of the Dark One yourself."

"Did Mytor tell you that?"

Irene nodded. The candlelight gave luster to her dark hair and revealed the contours of her high, firm breasts. Ransome's pulse speeded up just looking at her. Then he saw that she was regarding him as if he were something crawling in damp stone, and there was bitterness in him.

"There are things that even Mytor doesn't know, even omniscient Mytor--"

He checked himself.

"Well?"

"Nothing."

"You were going to tell me about how you are really a very honorable man. Why don't you? You have an hour before it will be time to betray the woman from the Hawk of Darion."

Ransome shrugged, and his voice returned her mockery.

"If I told you that I had been an acolyte in the Temple of the Dark One, and that I was condemned to death for blasphemy, committed for love of a woman, would you like me better?"

"I might."

"Ten years ago," Ransome said. He talked, and the mighty walls of the Temple reared themselves around his mind, and the music of the pleasure house became the chanting of the priests at the high altar.

* * * * *

He stood at the rear of the great Temple, and he had the tonsure and the black robes, and his name was not Ransome, but Ra-sed.
He had almost forgotten his Terran name. Forgotten, too, were his parents, and the laboratory ship that had been his home until the crash landing that had left him an orphan and Ward of the Temple.

Red candles burned before the high altar, but terror began just beyond their flickering light. It was dark where Ra-sed stood, and he could hear the cries of the people in the courtyard outside, and feel the trembling of the pillars, the very pillars of the Temple, and the groaning of stone on massive stone in the great, shadowed arches overhead. Above all, the chanting before the altar of the Dark One, rising, rising toward hysteria.

And then, like a knife in the darkness, the scream, and the straining to see which of the maidens the sacred lots cast before the altar had chosen; and the sudden, sick knowledge that it was Dura-ki. Dura-ki, of the soft golden hair and bright lips.

In stunned silence, Ra-sed, acolyte, listened to the bridal chant of the priests; the ancient words of the Dedication to the Dark One.

The chant told of the forty times forty flights of onyx steps leading downward behind the great altar to the dwelling place of the Dark One and of the forty terrible beasts couched in the pit to guard His slumber.

In the beginning, Dalir, the Sire, God of the Mists, had gone down wrapped in a sea fog, and had stolen the Sacred Fire while the Dark One slept. All life in Darion had come from Dalir's mystic union with the Sacred Fire.

Centuries passed before a winter of bitter frosts came, and the Dark One awakened cold in His dwelling place and found the Sacred Fire stolen. His wrath moved beneath the city then, and Darion crashed in shattered ruin and death.

Those who were left had hurled a maiden screaming into the greatest of the clefts in the earth, that the bed of the Idol might be warmed by an ember of the stolen Fire. Later, they had raised His awful Temple on the spot.

So it had been, almost from the beginning. When the pillars of the Temple shook, a maiden was chosen by the Sacred Lots to go down as a bride to the Dark One, lest He destroy the city and the people.

The chant had come to an end. The legend had been told once more.

They led her forth then--Dura-ki, the chosen one. Shod in golden sandals, and wearing the crimson robe of the ritual, she moved out of Ra-sed's sight, behind the high altar. No acolyte was permitted to approach that place.

The chanting was a thing of wild delirium now, and Ra-set placed a cold hand to steady himself against a trembling pillar. He heard the drawing of the ancient bolts, the booming echo as the great stone was drawn aside, and he closed his eyes, as though that could shut out the vision of the monstrous pit.

But his ears he could not close, and he heard the scream of Dura-ki, his own betrothed, as they threw her to the Idol.

* * * * *

At the table in the Yarotian pleasure house, Ransome's thin lips were pale. He swallowed his drink.

The woman opposite him was nearly forgotten now, and when he went on, it was for himself, to rid himself of things that had haunted him down all the bleak worlds to his final night of betrayal and death. His eyes were empty, fixed on another life. He did not see the change that crossed Irene's face, did not see the cold contempt fade away, to be replaced slowly with understanding. She leaned forward, lips slightly parted, to hear the end of his story.

For the love of golden-haired Dura-ki, the acolyte, Ra-sed, had gone down into the pit of the Dark one, where no mortal had gone before, except as a sacrifice.

He had hidden himself in the gloom of the pillars when the others left in chanting procession after the ceremony. Now he was wrenching at the rusted bolts that held the stone in place. It seemed to him that the rumbling grew in the earth beneath his feet and in the blackness of the vaulting overhead. Terror was in him, for his blasphemy would bring death to Darion. But the vision of Dura-ki was in him too, giving strength to tortured muscles. The bolts came away with a metallic screech, piercing against the mutter of shifting stone.

He was turning to the heavy ring set in the stone when he caught a glimmer of reflected light in an idol's eye. Swiftly he crouched behind the great stone, waiting.

The priests came, two of them, bearing torches. Knives flashed as Ra-sed sprang, but he wrenched the blade from the hand of the first, buried it in the throat of the second. The man fell with a cry, but a stunning blow from behind sent Ra-sed sprawling across the fallen body. The other priest was on him, choking out his life.

The last torch fell; and Ra-sed twisted savagely, lashed out blindly with the long knife. There was a sound of rending cloth, a muttered curse in the darkness, and the fingers ground harder into Ra-sed's throat. Black tides washed over his mind, and he never remembered the second and last convulsive thrust of the knife that let out the life of the priest.

He did remember straining against the ring of the great stone. The echo boomed out for the second time that night, as the stone moved away at last, to lay bare the realm of the Dark One.

Bitterness touched Ransome's eyes as he spoke now, the bitterness of a man who has lost his God.

"There were no onyx steps, no monsters waiting beneath the stone. The legends were false."
Ransome turned his glass slowly, staring into its amber depths. Then he became aware of Irene, waiting for him to go on.

"I got her out," Ransome said shortly. "I went down into that stinking pit and I got Dura-ki out. The air was nearly unbreathable where I found her. She was unconscious on a ledge at the end of a long slope. Hell itself might have been in the pit that opened beneath it. A geologist would have called it a major fault, but it was hell enough. When I picked her up, I found the bones of all those others...."

Irene's green eyes had lost their coldness. She let her hand rest on his for a moment. But her voice was puzzled.

"This Dura-ki--she is the woman on the Hawk of Darion?"

Ransome nodded. He stood up. His lips were a hard, thin line.

"My little story has an epilogue. Something not quite so romantic. I lived with Dura-ki in hiding near Darion for a year, until a ship came in from space. A pirate ship, with a tall, good-looking Earthman for a master. I took passage for Dura-ki, and signed on myself as a crewman. A fresh start in a bright, new world." Ransome laughed shortly. "I'll spare you the details of that happy voyage. At the first port of call, on Jupiter, Dura-ki stood at the top of the gangway and laughed when her Captain Jareth had me thrown off the ship."

"She betrayed you for the master of the Hawk of Darion," Irene said softly.

"And tonight she'll pay," Ransome finished coldly. He threw down a few coins to pay for their drinks. "It's been pleasant telling you my pretty little story."

"Ransome, wait. I--"

"Forget it," Ransome said.  

* * * * *

Mytor's car was waiting, and Ransome could sense the presence of the guards lurking in the dark, empty street.

"The spaceport," Ransome told his driver. "Fast."

He thought of the note he had given the crewman to deliver:

"Ra-sed would see his beloved a last time before he dies."

"Faster," Ransome grunted, and the powerful car leapt forward into the night.

* * * * *

Ships, like the men who drove them, came to Yaroto to die. Three quarters of the spaceport was a vast jungle of looming black shapes, most of them awaiting the breaker's hammer. Ransome dismissed the car and threaded his way through the deserted yards with the certainty of a man used to the ugly places of a hundred worlds.

Mytor had suggested the meeting place, a hulk larger than most, a cruiser once in the fleet of some forgotten power.

Ransome had fought in the ships of half a dozen worlds. Now the ancient cruiser claimed his attention. Martian, by the cut of her rusted braking fins. Ransome tensed, remembering the charge of the Martian cruisers in the Battle of Phoebus. Since then he had called himself an Earthman, because, even if his parentage had not given him claim to that title already, a man who had been in the Earth ships at Phoebus had a right to it.

He was running a hand over the battered plate of a blast tube when Dura-ki found him. She was a smaller shadow moving among the vast, dark hulls. With a curious, dead feeling in him, Ransome stepped away from the side of the cruiser to meet her.

"Ra-sed, I could not let you die alone--"

Because her voice was a ghost from the past, because it stirred things in him that had no right to live after all the long years that had passed, Ransome acted before Dura-ki could finish speaking. He hit her once, hard; caught the crumpling body in his arms, and started back toward Mytor's car. If he remembered another journey in the blackness with this woman in his arms, he drove the memory back with the savage blasphemies of a hundred worlds.

* * * * *

On the rough floor of Mytor's place, Dura-ki stirred and groaned.

Ransome didn't like the way things were going. He hadn't planned to return to the Cafe Yaroto, to wait with Mytor for the arrival of the priests.

"There are a couple of my men outside," Mytor told him. "When the priests are spotted you can slip out through the rear exit."

"Why the devil do I have to be here now?"

"As I have told you, I am a businessman. Until I have turned the girl over to the priests I cannot be sure of my payment. This girl, as you know, is not without friends. If Captain Jareth knew that she was here he would tear this place apart, he and his crew. Those men have rather an impressive reputation as fighters, and while my guard here--"

"You've been drinking too much of your own rotten liquor, Mytor. Why should I try to save her at the eleventh hour? To hand her back to her lover?"

"I never drink my own liquor, Mr. Ransome." He took a sip of his kali in confirmation. "I have seen love take
many curious shapes."

Ransome stood up. "Save your memoirs. I want a guard to get me to the ship you promised me. And I want it now."

"Mytor."
"Yes, Mr. Ransome?"
"There isn't any ship. There never was."

The Venusian shrugged. "It would have been easier for you if you hadn't guessed. I'm really sorry."
"So you'll make a double profit on this deal. I was the bait for Dura-ki, and Irene was bait for me. You are a good businessman, Mytor."
"You are taking this rather better than I had expected, Mr. Ransome."

Ransome slumped down into his chair again. He felt no fear, no emotion at all. Somewhere, deep inside, he had known from the beginning that there would be no more running away after tonight, that the priests would have their will with him. Perhaps he had been too tired to care. And there had been Irene, planted by Mytor to fill his eyes, to make him careless and distracted.

He wondered if Irene had known of her role, or had been an unconscious tool, like himself. With faint surprise, he found himself hoping that she had not acted against him intentionally.

* * * * *

Dura-ki was unconscious when the priests came. She had looked at Ransome only once, and he had stared down at his hands.

Now she stood quietly between two of the black-robed figures, watching as others counted out gold coins into Mytor's grasping palm. Her eyes betrayed neither hope nor fear, and she did not shrink from the burning, fanatical stares of the priests, nor from their long knives. The pirate's consort was not the girl who had screamed in the dimness of the Temple when the Sacred Lots were cast.

A priest touched Ransome's shoulder and he started in spite of himself. He tried to steady himself against the sudden chill that seized him.

And then Dura-ki, who had called him once to blasphemy, now called him to something else.

"Stand up, Ra-sed. It is the end. The game is played out and we lose at last. It will not be worse than the pit of the Dark One."

Ransome got to his feet and looked at her. He no longer loved this woman but her quiet courage stirred him.

With an incredibly swift lunge he was on the priest who stood nearest Dura-ki. The man reeled backward and struck his skull against the wall. It was a satisfying sound, and Ransome smiled tightly, a half-forgotten oath of Darion on his lips.

He grabbed the man by the throat, spun him around, and sent him crashing into another.

A knife slashed at him, and he broke the arm that held it, then sprang for the door while the world exploded in blaster fire.

Dura-ki moved toward him. He wrenched at the door, felt the cold night air rash in. A hand clawed at the girl's shoulder, but Ransome freed her with a hard, well-aimed blow.

When she was outside, Ransome fought to give her time to get back to the Hawk of Darion. Also, he fought for the sheer joy of it. The air in his lungs was fresh again, and the taste of treachery was out of his mouth.

It took all of Mytor's guards and the priests to overpower him, but they were too late to save Mytor from the knife that left him gasping out his life on the floor.

Ransome did not struggle in the grip of the guards. He stood quietly, waiting.

"Your death will not be made prettier by what you have done," a priest told him. The knife was poised.
"That depends on how you look at it," Ransome answered.
"Does it?"

"Absolutely," a hard, dry voice answered from the doorway.

Ransome turned his head and had a glimpse of Irene. With her, a blaster level in his hand, and his crew at his back, was Captain Jareth. It was he who had answered the priest's last question.

Mytor had said that Jareth's crew had an impressive reputation as fighters, and he lived just long enough to see the truth of his words. The priests and the guards went down before the furious attack of the men from the Hawk of Darion. Ransome fought as one of them.

When it was over, it was not to Captain Jareth that he spoke, but to Irene.
"Why did you do this? You didn't know Dura-ki, and you despised me."

"At first I did. That's why I agreed to Mytor's plan. But when I had spoken to you, I felt differently. I--"

Jareth came over then, holstering his blaster. Irene fell silent.
The big spaceman shifted uneasily, then spoke to Ransome.
"I found Dura-ki near here. She told me what you did."
Ransome shrugged.
"I sent her back to the ship with a couple of my men."
Abruptly, Jareth turned and stooped over the still form of Mytor. From the folds of the Venusian's stained tarab he drew a ring of keys. He tossed them to Ransome.
"This will be the first promise that Mytor ever kept."
"What do you mean?"
"Those are the keys to his private ship. I'll see that you get to it."
It was Irene who spoke then. "That wasn't all that Mytor promised him."
The two men looked at her in surprise. Then Ransome understood.
"Will you come with me, Irene?" he asked her.
"Where?" Her eyes were shining, and she looked very young.
Ransome smiled at her. "The Galaxy is full of worlds. And even the Dark One cancels his debts when the night of Bani-tai is over."
"Let's go and look at some of those worlds," Irene said.

Contents

IF AT FIRST YOU DON'T ...
By John Brudy

To Amos Jordan, Secretary for Cislunar Navigation, no situation was unsolvable. There were rules for everything, weren't there.... Except maybe this thing...
"What's the matter, anyway?" Amos Jordan snapped at his assistant. "Is everyone in the Senate losing their mind?"
"No more than usual," said Clements, the undersecretary. "It's just a matter of sentiment."
"Well, not exactly," began Clements soothingly. "After all, now, '58 Beta was the first long-lived satellite ever launched, and the first successful shot of the old Vanguard series. People are proud if it. It's a sort of monument to our early efforts in astronautics."

Jordan sipped experimentally, adding a little sugar.
"But, Clem, the sky's full of the things," he complained. "There must be a hundred fifty of them in orbit right now. They're a menace to navigation. If this one's due to fall out, I say good riddance."
Clements spread his hands helplessly.
"I agree, chief. But, believe me, a lot of people have made up their minds about this thing. Some want to let it burn up. Some want to retrieve it and stash it in a museum. Either way it's a decision we're not going to reach in this office."

Jordan tossed down the rest of his lemonade.
"I'd like to know why not," he snapped, almost bristling.
"Well, frankly this thing is moving pretty fast." Clements fished a facsimile sheet out of his jacket pocket.
"Everybody's getting into the act." He handed the sheet across the desk. "Read this; it'll bring you up to date."

Jordan stared at the sheet.
"Senate Committee Probes Beta," ran the lead, followed by,
"The Senate Advisory Committee for Astronautics began hearing testimony this morning in an effort to determine the fate of satellite '58 Beta. Mr. Claude Wamboldt, leader of the CCSB (Citizens' Committee to Save Beta), testified that the cost of retrieving Beta from orbit would be trivial compared to its value as an object of precious historical significance. He suggested the Smithsonian Institution as an appropriate site for the exhibit. At the same time the incumbent Senator from Mr. Wamboldt's district filed a bill in the Senate which would add a complete wing to the Smithsonian to house this satellite and other similar historic objects. In later testimony Mr. Orville Larkin, leader of the unnamed committee representing those in opposition to the CCSB stated that his group felt that to snatch Beta from orbit at this moment of its greatest glory would be contrary to natural law and that he
and his supporters would never concede to any plan to save it."

Jordan raised his head and stared over the fax sheet at Clements. "Am I going out of my mind, or did this really happen?"

"It sure did ... and is," said Clements. "Later on, I am told, Wamboldt threw a chair at Larkin, and the committee recessed after declaring both men in contempt."

Jordan shook his head. "Why didn't somebody tell me about this?"

"I sent you a ten page memo about it last week," objected Clements, somewhat aggrieved. "Gave you the whole story with extrapolations."

"Memo! You know I never read memos! I ought to fire you ... I would if I could ... you 'appointee.'"

Clements shook his head warningly. "Better not, chief. You'll need me for the briefing."

"The briefing. You're scheduled to testify before the committee tomorrow afternoon at three." * * * * *

Senator Darius: Mr. Jordan, will you please state whether or not there is a satellite body known as '58 Beta?

Mr. Jordan: Yes, sir, there is.

Senator D: Will you describe its present orbit?

Mr. J: I'd be glad to, Senator. It now has a perigee slightly below 110 miles and an apogee of about 400 miles. The last perigee occurred 400 miles last of the Seychelles Islands about 35 minutes ago. Roughly its present position is about 250 miles above Manus Island.

Senator D: When do you expect it to enter the atmosphere for the final plunge to its death?

Mr. J: (bridling) Well, Senator, we in the Secretariat don't usually refer to such an occurrence in exactly those terms. It's really just a problem in celestial mechanics to us, and ...

Senator D: (glaring) Your administrative assistant testified a few moments ago, sir, that '58 Beta has had a life of 185 years. Will you kindly explain to the committee how anything which has had a life can end in anything but death?

Mr. J: (uh ...) I believe I appreciate your point of view, Senator. '58 Beta experiences a very steep re-entry at each perigee. According to our computers it will disintegrate on the 82nd or 83rd revolution following that of 2:48 Greenwich crossing this afternoon.

Senator D: Tell us, Mr. Jordan ... how many revolutions about the Mother Planet has '58 Beta made since its launching?

Mr. J: (hastily working his slide rule) Upwards of eight hundred thousand, I should say. I can provide you with an exact figure if you wish.

Senator D: That won't be necessary, Mr. Jordan. Eight hundred thousand, give or take a few paltry thousand, is close enough. Eight hundred thousand endless, lonely revolutions about an unthinking, uncaring, ungrateful world is quite enough. Quite enough, Mr. Jordan. Now sir; (squinting over his glasses) what do you think is the proper action to be taken in the matter of retrieving this historic satellite from its orbit so that it may be preserved as a living memorial to the gallant efforts of those early pioneers ... those brave and intrepid men of Cape Canaveral ... to stand forevermore as a beacon and a challenge to our school children, to our students, our aspirants for candidacy to the Space Academy and to our citizens for all time to come?

Mr. J: Nothing, Senator.

Senator D: (aghast) Am I to understand, Mr. Jordan, that you are suggesting that this symbol, this quintessence of an historic and magnificent era in mankind's history ... this unique and precious object ... should be allowed to destroy itself and be lost forever?

Mr. J: (squeezing) Senator, there are dozens of those things up there. Every year one or two burns up. They have no usefulness. They're a menace to navigation. I ..."
count in the long, long haul!

* * * * *

Jordan sat limply at his desk, his hands hanging loosely at his sides. "It's unbelievable," he muttered dully.
"Where did this man Darius come from?"
"It doesn't matter much," Clements answered unsympathetically. "It's where he is now that counts."
Jordan shook his head.
"There has to be a way out. A clean, quick way out."
After a moment's thought Clements said, "Isn't there a regulation about orbital debris?"
Jordan nodded dully. "Someplace. Number 710.1, I think. Hasn't been invoked in years. Once they stopped using chemical fuels, we stopped having wrecks."
"Still," Clements went on more eagerly, "Beta's really a piece of debris, isn't it? It's not working or transmitting or whatever it was supposed to do, is it?"
"No." Jordan shrugged impatiently. "But, good grief, this thing isn't debris. Debris is ... is big chunks of things; broken up space stations, or ... or nuclear engines and things like that."
"Hell, no, chief," yelled Clements, jumping to his feet. "This is debris, pure and simple. That's your answer!"
Jordan's eyes slowly brightened.
"Clem, maybe you're right. Regulation 710.1 says that any orbital debris constituting a demonstrable menace to navigation may be destroyed at the discretion of this office." He brushed his hands together with finality. "That should do it."
Suddenly Clements' enthusiasm degenerated to a faint smile.
"I've just got to wondering, chief. Do we dare go right ahead with this?"
Amos Jordan's eyes took on a piercing glitter of command.
"This is our job, Clements. We should have done it long ago. Get Statistical and have them find out how much boogie time is consumed in plugging that silly thing into every takeoff problem. Multiply that by all the launch stations. Convert it into man-hours per year and make that into a dollar figure. That always scares the wits out a Congressman. They'll knuckle under..."
He paused and cocked an ear toward the door. A faint hubbub was now percolating through from the receptionist's lobby. It grew louder. Suddenly the door opened, letting in a roaring babble, as Geraldine ... the usually poker-faced secretary ... leaped through and slammed it shut again. Her eyes, behind their thick lenses, were round and a little wild.
"It's General Criswell and Admiral Flack," she panted. "They insist on seeing you." She gasped for breath and added, as though she could not quite believe her own words, "And ... and ... oh, Mr. Jordan; they're quarreling!"
Jordan said, "Quarreling? Two staff men quarreling?" He looked uncertainly at Clements. "I thought there was a regulation against that?"
Clements gave a palms up shrug.
"Well, there is," snapped Jordan. "Has something to do with interservice unity or something ... been on the books for years. Send them in, Gerry."
Tentatively she opened the door and almost had time to gesture before being bowled over by the visitors.
* * * * *

Admiral Flack had the advantage of volume, and Jordan got his message first.
"Jordan," he roared in true bullhorn style, "I want to make one thing clear! '58 Beta was Navy through and through! Start to finish! She's got salt water on her, and she's going to be pulled out of orbit and that's that!"
"Navy through and through, hell!" sneered General Criswell. "A fine botch you made of it, too! How many times did you try before you slung that thing up there? How many goofs were there afterward? The Dodgers are in last place, and they've got five pitchers who could have done it without warming up."
"Watch your mouth, Criswell," advised Admiral Flack, tightlipped. "There's considerable tonnage of Air Force hardware under water, too. Maybe the Russians beat us, and maybe von Braun got lucky, but ours is still there, Mac! Just remember that!"
"You people have fetishes," stormed the General. "You even keep Admirals' hats and hang them on pegs. Who wants your hat, you pack rat? Where would we ever keep all the junk you people want to save?" He shuddered. "Good God! Hats!"
"That's ... just ... about ... all ... I'm ... going ... to ... take," Admiral Flack said, spelling out the entire sentence. He stared furiously at the General. "Don't think we don't know that once '58 Beta is down it'll be your precious damned '61 Epsilon that's in the oldest orbit. I'll bet you fly boys will break your silly backs trying to recover that one when its time comes."
Jordan pounded his desk. "Gentlemen, shut up!"
Appalled by this exhibition of low level civilian effrontery, they both did so without really meaning to.

"Gentlemen," Jordan announced firmly in the almost uncanny silence, "the entire problem is solved as of now. '58 Beta constitutes a demonstrable menace to navigation. Under the authority vested in this office I will issue instructions to have it picked up by a salvage ship tomorrow. Once it's brought down you may claim it if you like and do with it what you please."

Admiral Flack shot a look of pure triumph at General Criswell. The General, however, was not paying attention. He was looking, almost with an expression of pity, at Amos Jordan.

"I'm afraid, Mr. Jordan," he said slowly, "that you don't fully realize the implications of such an act at this time. It may be within your jurisdiction to salvage and all that, but I believe that the decision whether to salvage now rests with the legislature. I would hesitate to act without securing high ... very high concurrence in this matter."

Flack erupted.

"Criswell, you're an idiot! A chicken hearted idiot! On top of that you haven't any business telling Jordan ... ah, Mr. Jordan what he can and can't do."

Criswell glared icily at Flack.

"A mere suggestion," he gritted and stalked out.

Admiral Flack paused and bestowed a warm smile upon Amos Jordan before hurrying out the door after the General. As the door closed Jordan heard the contest break out afresh in the lobby.

That was only the beginning. The general population, eager for a silly season diversion, chose sides with religious fervor. Congress went into emergency session. Newspapers drew their lines and fought ferociously. Student riots began on the second day and sympathy strikes on the third.

On the fourth Jordan got the big news break first, for a change. With growing caution he had been holding the situation unaided by the simple expedient of refusing to issue a salvage permit without which '58 Beta could not be touched. Clements brought the news at midnight, interrupting a tempestuous press conference.

"Ascension reports Beta out of orbit."

"Perturbed that badly already? Maybe something's wrong with their computers."

"Not perturbed, chief. Gone. It's just not there any more. It's been picked up ... no doubt about it."

Jordan's face purpled.

"I want a complete ground tracking report on that pebble for the last three revolutions. Fast!"

"I doubt if we can get it," said Clements dubiously. "Woomera only checks it occasionally to train radar operators. Perigee was south of Singapore on the last two passes, but so low I doubt if they got any clear sightings. It would be a waste of time."

Jordan wrung his hands. "You have something better?"

Clements sat for a minute with a faraway look in his eyes.

"Do we know anyone who can make Navy Operations toe the mark?"

"Of course. Why?"

" Wouldn't it be interesting to filter the mission reports of all Navy ships that have been outside the atmosphere in, oh, say the last thirty-six hours?"

Jordan's eyes lit up like twin afterburners.

"They'll have it hidden like the British crown jewels, but..." He grabbed the phone. "Gerry? Have General Criswell paged and ask him to come to my office if possible." He chuckled triumphantly. "Criswell's on the Joint Security Service Board ... what an exercise for that gumshoe outfit!"

It took three hours for General Criswell's ferrets to obtain facsimiles of the reports needed. A sweating staff (borrowed from the cryptographic section to preserve secrecy) finally broke them down to three probables: a Lunar courier which had aborted and returned to base for no clean cut reason, an alleged training exercise in three body orbits with the instructors' seats inexplicably filled with nothing lower than the rank of Lieut. Commander and a sour smelling sortie out of Guantanamo labeled Operation Artifact.

Jordan remained sold on the latter for half an hour until fuel consumption and flight time log figures failed to correlate with an orbital flight, and the bottom fell out of the case. As it turned out it was the courier after all. Both the pilot and his commander refused to talk until presented with the alternative of court-martial proceedings.
Senator Darius: Now, Admiral, I'm going to put the question to you this way, just to see if I can get a straight answer. Did you or did you not issue orders to Lunar Courier G771 specifying in general substance that it was to retrieve satellite '58 Beta?

Admiral Flack: (hurt but proud) The Navy, sir, has a long record of gallantry, a tradition of derring do dating back to John Paul Jones ... a tradition we are all proud of and which we continue and will always continue....

Senator D: (with acid patience) Again, if I may put the question, Admiral. Did you or did you not issue the order?

Admiral F: (defiantly) '58 Beta is Navy property, sir! I am glad and proud to say that I issued the order to retrieve her.

Senator D: Aha! (to the recording secretary) Did you get that? And now, Admiral, will you explain to this committee why this action, in view of the exigencies of the present situation, didn't strike you as singularly high handed, not to say out of your jurisdiction?

Admiral F: (after a whispered consultation with an aide) Well, sir, there is a precedent. May I recall to your attention an incident recorded in Navy history about eighty years ago. An officer of flag rank, if my memory holds, in defiance of instructions and in a damaged ship, at great danger to himself and his crew, acting on an operational plan which had been scathingly disapproved by his superiors, went to the rescue ... the successful rescue ... of a three-man Lunar exploration party which had become lost near the south scarp of Sinus Iridum. The officer's name, I am almost certain, was Captain Steven Darius ... the Senator's grandfather, I believe ... an officer the Navy will never cease to honor.

Senator D: (shuffling papers, clearing throat, wiping glasses) Well, ah, yes Admiral ... I do recall something along those lines. Of course, this is different ... altogether different. But at the same time, sir, a most interesting parallel. The ... ah ... the committee will recess until two o'clock. You are excused, Admiral. And ... oh, yes ... if you're free, sir ... possibly you might join me at lunch?

* * * * *

"If I were you, chief," said Clements soothingly, "I would just stop worrying about your jurisdiction in this thing. Beta's out of orbit, and we no longer have a problem. How nice can things be?"

Jordan gritted his teeth and wadded up paper with an odd gesture, as though his fingers were encircling someone's neck.

"You will be sorry you said that," he said peevishly. "Whatever happens I'm going to assign it to you for action while I sit on the bench and cheer." He rang for Gerry. "What's happening now ... I haven't been out of here in three hours."

Clements stretched out on the Vibrolounge and turned it on.

"The president," he began, as the machine went to work, "has called an arbitration meeting. Everyone's in on it ... Darius, Flack, Criswell, Wamboldt, Larkin and the Lord knows who else. They are supposed to come to some sort of agreement as to what's to be done. The minutes of the meeting are expected to take the form of a recommendation to congress for action. By way of the Advisory Committee for Astronautics with Darius introducing the motion, of course."

"Of course," echoed Jordan. "Who else could?"

The door opened, and the huge glasses of Gerry peered in.

"Yes, chief?"

"Get on your telephone and finagle a way to route the first press release from this big arbitration meeting direct to my DeskFax. Can do?"

Gerry nodded.

"No sweat, boss," she said and backed out.

"Now," said Jordan, returning to Clements, "you can get your overweight carcass out of my chair and let me into it. Sit on the hot seat for a while. I'll relax and you read the news when it comes in. It'll be your bad luck, not mine."

The facsimile machine gave a little chug and began unwinding a pale green, endless sheet. Clements began to read from it.

"In an unprecedented session at the White House today the President revealed that a unanimous decision had been reached regarding the fate of '58 Beta will be placed in the the congress for action it was recommended that a solid copy of the historic satellite, complete with meteor pits, be made and placed in a special display in the Smithsonian Institution. The original itself, '58 Beta will be placed in the third stage payload compartment of the Smithsonian's Vanguard missile and ... in an historic re-enactment of the first launch ... will be injected into permanent orbit about the Earth."

There was a loud snap as Jordan turned off the Vibrolounge. In a single, convulsive movement he was on his
feet and around the desk.
"Get out of my chair," he yelled at Clements. "Let me at that phone! Get Gerry in here! Get Flack on the telephone ... try to catch him at the White House if you can! And get Administration to send over some forms!"

Clements started for the other phone ... then stopped and stared at Jordan.
"Forms?" he repeated slowly. "What kind of forms?"
Jordan's answer rattled the windows.
"Resignation forms, you idiot!"

* * * * *

General Criswell walked briskly to the front of the conference room. He took chalk in one hand and pointer in the other. He rapped sharply on the desk with the pointer and sent a keen, Air Force type glance over his assembled staff.

"Gentlemen, by direction of Congress and under orders issued by the Secretary of Defense the Air Force has been assigned the mission of relaunching satellite '58 Beta. The launching vehicle will be either the Smithsonian exhibit Vanguard or a duplicate if the old one proves to be structurally unsuitable.
"To help you understand the magnitude of the problem involved and, of course, to give you guidelines for additional staffing, I will review for you the major techniques utilized in the original Vanguard launchings. I have had copies of the 1958 launch documentary films printed for each department. They represent excellent source material for your planning sessions.
"Now, gentlemen ... the original Vanguard was the classic example of what we now call, somewhat facetiously I'm afraid, the hybrid propulsion system. It utilized chemical fuels throughout ... liquid oxygen and kerosene in the first stage, fuming nitric acid and unsymmetrical dimethyl-hydrazine in the second stage and an unknown form of solid propellant in the third stage."

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A buzz of nervous comment ran through the assembled officers, and sitting in the back row, Jordan felt his blood run cold. Where, he wondered in a sort of dreadful daze, would they even find a crew to work on this project. No sane Launch Monitor he had ever known would even go near such a bomb, much less work on it.

The General rambled on.

"Now the guidance system, gentlemen, may at first strike you as rather incredible. However, it worked remarkably well in the original, and there seems no reason to suppose we cannot force it to repeat. I foresee some difficulty in finding manufacturers whose shop practices are flexible enough ... or sloppy enough, if you prefer ... to turn out a piece of mechanical gear to such low tolerances. However, we will ask for bids and award to the lowest; that should do it. It always has in the past at any rate." He paused to allow the chuckles to subside.

Jordan crept quietly out and headed for his office.

Clements was busy supervising the placement of two new file cabinets. When he saw Jordan's face, he turned directly to his desk, poured a lemonade and handed it to his chief. Jordan took the glass, paused thoughtfully, opened a drawer and added a couple shots of gin.

Clements raised his eyebrows encouragingly, but Jordan simply drank and shook his head dully.
"Horrible," he said. "Horrible, horrible."
He turned and walked slowly back to the conference.
By this time General Criswell had a film showing in progress.
"This, gentlemen," he was saying, "was the famous launch attempt of December sixth, 1957."

Jordan had never seen the film, and he watched in fascination as the launch crew scurried about their duties. Propellants and explosives people appeared, waddling in grotesque acid suits. Liquid oxygen boil off made a hazy lake in which men walked with apparent unconcern.

Then, from a fixed and apparently unattended camera came a steady, portentous view of the rocket ... sleek and so incredibly slim that Jordan wondered why on Earth it didn't simply topple over and be done with it.

The sound track came to life with sudden, brassy violence. Someone was counting backward. When he reached zero, the first stage engine burst into life, the rocket lifted off its platform, slowed, began to tilt slowly to one side and settled back into the stand. No, it kept right on going through the stand. The rear section began to crumple. Then there was a horrible burst of flame which engulfed the lower part of the rocket and then, with perfectly savage violence, erupted in great billowing bursts of fire until only the extreme tip of the missile was visible. The conical top of the first stage fell off and disappeared into the inferno rather like an ice cream cone falling into the sun. The film stopped at this point.

"That," said General Criswell matter-of-factly, "was the end of the first launch attempt. You will note, gentlemen, that not only was the vehicle structurally weak, but it also burned well, once ignited. These two points, I dare say, will exercise considerable influence over our handling of this project."
Jordan, sick to his stomach, got up again and left the conference, this time for good.

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Once begun the program proceeded feverishly. A corps of designers rooted through every available shred of data: microfilm, old blueprints and ancient engineering notes from files so old that no one knew why they still existed. Films, recorded data, technical histories and newspaper reports ... nothing was spared.

Slowly at first and then with almost magical speed, the ancient Vanguard came to life. Her structure took shape. Her tankage and guidance were reproduced. Like long atrophied nerves and muscles her controls and electrical system once more hummed with power. Her engines were duplicated and tested (though not without an explosion or two), and her gyros were run in (by shuddering engineers who were accustomed to hitting Marsport on the nose with a box half the size). And tiny Beta, her wee antennas and Hoffman solar cells carefully fitted into place, now had a twin sister enshrined in the Smithsonian Institution.

Jordan reflected that it was a solution bordering on genius even though he was forced to admit that Senator Darius was its foremost architect. His feeling for the old coyote was still something less than brotherly, though forced association had revealed unsuspected and valuable negotiative skills.

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One morning several weeks later Jordan sat before his desk which was piled high with unanswered correspondence. He drank lemonade and glared across at Clements whose desk was piled even higher.

"I told you this was going to be your baby," Jordan said, "but I guess I can't make it stick. There's too much of this stuff." He waved at the stacks of paper. "Where does all this junk come from?"

Clements picked up a letter at random.

"This one," he said, "is from the Dupont Chemical Corp. They want us to send them the quality control specification for the hydrazine that was used as fuel in the first launch. They say they can't proceed till they have it."

He tossed the letter aside and picked up another. "Here's a purchase request for four hundred yards of sailcloth. Now what the hell do you suppose they want sailcloth for?"

"Maybe it's for another project," said Jordan, cramming half a doughnut into his mouth. "I found one yesterday for hypodermic needles. On top of that it wasn't signed."

"That figures," said Clements tossing the letter aside and picking up another. "Now, how's this ... good grief! The Ancient Order of Hibernians, if you please, formally requests that ... since '58 Beta was launched on St. Patrick's day ... to do otherwise with this launch would be unthinkable, sacrilegious, treasonable, etc, etc."

Jordan froze in his chair.

"That's the one!" His voice sounded faintly strangled. "That's the one that'll kill us, right there! I have a feeling for these things. How long till St. Patrick's day?"

Clements looked at his desk calendar. "Three weeks."

Jordan's eyes rolled upward. "We're dead!" he said, buzzing for Gerry. "Dead as mackerel."

Gerry answered, and Jordan asked for General Criswell.

* * * * *

A fine seabreeze was whipping ashore at Canaveral Space Port; not strong enough to be a nuisance, but strong enough to blow Senator Darius' emerald green tie persistently around behind his neck. He was still puffing a little from his climb up the steps to the balcony on top of the Space Control Center. As soon as he caught his breath he tugged at Jordan's elbow and said, "Mr. Jordan, I have the great honor to introduce to you Mr. Patrick McGuire, president of the Ancient Order of Hibernians."

Jordan shook hands, noticing as he did so that Mr. McGuire was carrying something that closely resembled a hip flask. It had a bright green silk ribbon tied around the neck.

"It's a pleasure," he said. "What's in the bottle?"

Mr. McGuire laughed a rich bellow.

"That, me friend," he said in a brogue so carefully cultivated that Jordan winced almost visibly, "is a bottle o' wather from the River Shannon, fer the christening', b'dad 'n' bejabers."

"The christening?" Jordan echoed hollowly.

"Indade, the christenin' ... with the Senator's kind permission I'll now step down and officiate. One piddlin' smash at the nose of yonder rocket is all I ask. One smash and a Hail Mary, and she's off to Glory!"

"Jordan ..." began the Senator.

"Now, Senator ..." began Jordan.

But the bullhorn above them drowned out everything and effectively stalled the plans of the Hibernians by announcing in deafening syllables that everyone was to clear the launch area.

In the distance Jordan observed dozens of tiny figures scuttling from the gleaming Vanguard toward something that looked vaguely like a turtle but which he had heard was called a blockhouse.
"I think," he said in unutterable relief, "that we're about ready to launch."
Jordan finally found Clements in the milling throng. They stood at the balcony rail staring fixedly at the Vanguard as the count progressed downward with what seemed dreadful slowness.

"How long is a second, anyway?" growled Jordan peevishly.

The countdown proceeded to minus twenty minutes ... minus fifteen minutes. Then came the quick announcement, "The count is T minus twelve minutes and holding."

"Twelve minutes and holding?" repeated Jordan jumpily. "What does that mean?"

"It means," answered Clements with just a touch of superiority, "that they have stopped the count at T minus twelve minutes because something is wrong. It will delay the launch."

Jordan wrung his hands fretfully.

"Something wrong? I never heard of such a thing. What could possibly go wrong?"

"Oh," ventured Clements, "I suppose there are a few things about this rocket that could fail to function under unusual circumstances." He snubbed out his cigarette. "After all, your watch stops sometimes, doesn't it?"

"Sometimes," Jordan admitted sourly, "but never at T minus twelve minutes."

After a short time the bullhorn shook the area with the news that the count had resumed. Jordan borrowed Clements' binoculars and stared fixedly at the abandoned Vanguard. Suddenly he started violently. "My God, Clem," he yelled, "it's on fire! There's smoke flying out right there in the middle. Look!"

Clements took a quick glance.

"Relax, chief," he said reassuringly. "It's oxygen coming from a vent. They can't seal the oxygen tank till just before launch, or it'll blow up."

"Oh, it can't blow up," quavered Jordan, going to pieces. "But it will. I feel it in my bones. It's going to blow up ... ker BOOM!"

Clements patted him on the back.

"Stop worrying, chief. It's going to work just fine. You wait and see."

Jordan shook his head in disbelief. "kerBOOM!" he said faintly.

The bullhorn announced T minus four minutes. To divert Jordan's attention Clements suggested that he watch the pilots of the photography ships who were about to board. With some difficulty Jordan focussed the instrument and observed the two pilots walk across the apron in front of the main operations building and climb into their small ships. A blue halo formed softly around the stern of each as they cut on the engines and brought them up to idle.

Then suddenly the count was a T minus ten seconds. 9 ... 8 ... 7 ... 6 Jordan thought he was going to faint ... 3 ... 2 ... 1 Zero!

There was a dazzling flash of igniting kerosene and lox which caused Jordan to jump into the air, a terrible burst of smoke and dust and then an overwhelming, harsh shattering roar such as had not disturbed Canaveral Space Port in more than a hundred years.

Deafened Clements looked at Jordan; saw his lips form the work "ker BOOM."

But in spite of all the evidence to the contrary the Vanguard was off the launcher, balancing with unbelievable, rocklike steadiness on that flickering, fiery column. Slowly, almost painfully the thing rose, gathered speed, pitched slowly eastward and bored triumphantly into the sky. Beside it, a thousand yards to the north and south, sped the photo ships, their drive haloes still scarcely brighter than when idling on the ground. With cameras whirring they escorted '58 Beta into space for the second time.

There was considerable confusion, some hoarse cheering and a great deal of milling around. Clements got a grip on Jordan and steered him to the AstroBar where two quick ones put him back together again.

"Now, what we should do," Clements suggested, "is to go down to the trajectory section and find out the latest word on the launch analysis."

Jordan hiccupped.

"Why?" he said, a little belligerently. "What's to analyze? We got it launched, didn't we? What more d'they want? Besides, I like it here."

Forty five minutes later the reports clattered in from Cairo and Woomera. In the Port Commander's private briefing room a young woman brought a sheaf of papers to the Commander. He began to read aloud. The audience leaned forward in strained attention.

"Preliminary flash report on the re-launch of satellite '58 Beta. The launch phase was eminently successful. The hold at T minus twelve minutes was not due to any malfunction in the missile itself, but rather to a disorder of another kind ... the engineer who was functioning as Launch Monitor had fainted in the blockhouse. The count was picked up under the direction of the Assistant Launch Monitor. After launch the three stages of the rocket separated
properly, and injection into orbit occurred at the predicted altitude."

He paused and shuffled the papers.

"Now I have here," he continued, dropping a sheet and picking it up, "the description of the orbit now occupied by '58 Beta. We have a perigee of six hundred twenty five miles and an apogee of twenty nine hundred miles, and... oh, my word; this is a tough break! Well, gentlemen, we can't win 'em all. As you know, we had hoped for a permanent orbit. However, according to our computers, while '58 Beta is now in an orbit, it is a degenerative one. She will unfortunately suffer a progressive perigee drop on each resolution and after three hundred forty eight years, seven months and approximately nineteen or twenty days she will re-enter the atmosphere and burn up. I am heartily sorry, gentlemen."

* * * * *

They returned to the AstroBar, and Clements began trying to catch up with Jordan.

"You know," said Jordan, his head wobbling a little with the emphasis he put into the words, "this is the damnedest farce in the history of the world."

"You're absolutely right, chief," agreed Clements, taking another slug. "And what are we going to do about it?"

Over his empty glass Jordan gave Clements a slow, confidential wink. Then he fished some papers out of his pocket. He folded them carefully and slipped them into an envelope. Meticulously drying a spot on the bar with his coatsleeve he put down the envelope and began writing on it. Finally he finished. Sealing it he waved it in the air in front of Clements.

"These," he said solemnly "are the resignation forms you got for me that day. Do you remember those resignation forms, Clements, you old appointee, you?"

Clements set his glass down indignantly.

"Certainly I remember, old chiefie. I remember because I got a set for myself while I was at it."

"Well, good for you, old appointee. Now, you take this envelope, and when we get back to Washington you put it in the office archives file, O.K.? Safest place this side of Fort Knox."

"Depend on me, chief," he said, taking the envelope and reading the instructions Jordan had written. To be held for the use of the Undersecretary for Cislunar Navigation incumbent in the year 2492. "Good idea," said Clements. "Let's drink to the jerk ... O.K.?"

* * * * *

Memo: 92 8574 27 October 2492
From: Secretary for Cislunar Navigation
To: Undersecretary
The oldest item in the archives file was opened today. We are not certain that it does not constitute some sort of barbaric practical joke. Note that the forms involved have been superseded several dozen times over since they were originally printed. Investigate and report.

Memo: 92 1751 29 October 2492
From: Undersecretary for Cislunar Navigation
To: Secretary
Due to excessive demands for time caused by the present Congressional furor regarding our department and its rights and duties concerning debris collection and disposal we have been unable to act on your memo 92 8574. Present priority weighting indicates that the earliest compliance date will be late in December. Please denote concurrence.

Contents

WHAT NEED OF MAN?
By Harold Calin

Bannister was a rocket scientist. He started with the premise of testing man's reaction to space probes under actual conditions; but now he was just testing space probes--and man was a necessary evil to contend with.

When you are out in a clear night in summer, the sky looks very warm and friendly. The moon is a big pleasant place where it may not be so humid as where you are, and it is lighter than anything you've ever seen. That's the way it is in summer. You never think about space being "out there". It's all one big wonderful thing, and you can never really fall off, or have anything bad happen to you. There is just that much more to see. You lie on the grass and
look at the sky long enough and you fall into sort of a detached mood. It's suddenly as if you're looking down at the
sky and you're lying on a ceiling by some reverse process of gravitation, and everything is absolutely pleasant.

In winter it's quite another thing, of course. That's because the sky never looks warm. In winter, if you are in a
cold climate, the sky doesn't appear at all friendly. It's beautiful, mind you, but never friendly. That is when you see
it as it really is. Summer has a way of making it look friendly. The way you see it on a winter night is only the
merest idea of what it is really like. That's why I can't feel too bad about the monkey. You see, it might have been a
man, maybe me. I've been out there, too.

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There are two types of classified government information. One is the type that is really classified because it is
concerned with efforts and events that are of true importance and go beyond public evaluation. Occasional
unauthorized reports on this type of information, within the scope that I knew it at least, are written off as
unidentified flying objects or such. The second type of classified information is the kind that somehow always gets
into the newspapers all over the world ... like the X-15, and Project Dyna-Soar ... and Project Argus.

Project Argus had as its basis a theory that was proven completely unsound six years ago. It was proven
unsound by Dennis Lynds. He got killed doing it. He had to do with return vehicles from capsules traveling at escape
velocity, being oriented and controlled completely by telemetering devices. It didn't work. This time, the monkey
was used for newspaper consumption. I'm sure Bannister would have preferred it if the monkey had been killed on
contact. It would have been simpler that way. No mass hysteria about torturing a poor, ignorant beast. A simple
scientific sacrifice, already dead upon announcement, would have been a fait accompli, so to speak, and nothing
could overshadow the success of Project Argus.

But Project Argus was a failure. Maybe someday you'll understand why.

Because of the monkey? Possibly. You see, I flew the second shot after Lynds got killed. After that, came the
hearing, and after that no men flew in Bannister's ships anymore. They proved Lynds nuts, and got rid of me, but
nobody would try it, even with manual controls, where there is no atmosphere.

When you're putting down after a maximum velocity flight, you feed a set of landing coordinates into the
computer, and you wait for the computer to punch out a landing configuration and the controls set themselves and
lock into pattern. Then you just sit there. I haven't yet met a pilot who didn't begin to sweat at that moment, and
sweat all the way down. We weren't geared for that kind of flying. We still aren't, for that matter. We had always
done it ourselves, (even on instruments, we interpreted their meaning to the controls ourselves) and we didn't like it.
We had good reason. The telemetry circuits were no good. That's a bad part of a truly classified operation: they don't
have to be too careful, there aren't any voters to offend. About the circuits, sometimes they worked, sometimes not.
That was the way it went. They wouldn't put manual controls in for us.

It wasn't that they regarded man with too little faith, and electronic equipment with too much. They just didn't
regard man at all. They looked upon scientific reason and technology as completely infallible. Nothing is infallible.
Not their controls, not their vehicles, and not their blasted egos.

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Lynds was assigned the first flight at escape velocity. They could not be dissuaded from the belief that at
ultimate speed, a pilot operating manual controls was completely ineffectual. Like kids that have to run electric
trains all by themselves, playing God with a transformer. That was when I asked them why bother with a pilot
altogether. They talked about the whole point being a test of man's ability to survive; they'd deal with control in
some other way. They wouldn't put in manual controls, not for that. They wouldn't put in manual controls, not at
all. They looked upon scientific reason and technology as completely infallible. Nothing is infallible.

I feel the way I do about the monkey, Argus, because, in a way, I all flew with the controls. They didn't
regard man at all. They looked upon scientific reason and technology as completely infallible. Nothing is infallible.
Not their controls, not their vehicles, and not their blasted egos.

"There will be no manuals in my ships," he said. "It would negate the primary purpose of this project. We must
ascertain the successful completion of escape and return by completely automatic operation."

"How about emergency controls?" I asked. "With a switch-off from automatic if they should fail."

"They will not fail. Any manual controls would be inoperative by the pilot in any case. No more questions."

I feel the way I do about the monkey, Argus, because, in a way, we all know about that time. You don't like
having spent your life in a rather devoted way with purposes and all that, and then being placed in the hands of a
collection of technologists like just so many white mice ... or monkeys, if you will. Lynds, of course, had little
choice. The project was cleared and the assignment set. He hated it well enough, I know, but it was his place to
perform the only way one does.

It ended the way we knew it would. I heard it all. It wasn't gruesome, as you might imagine. I spoke with Lynds
the whole time. It was sort of a resigned horror. The initial countdown went off without a hitch and the hissing of the
escape valves on the carrier rocket changed to a sound that hammered the sky apart as it lifted off the pad.

"Well, she's off," somebody said.

"Let's don't count chickens," Bannister said tautly. Wellington G. Bannister worked for the Germans on V-2s.
He is the chief executive of technology in the section to which we were assigned at that time. He is the world's leading expert on exotic fuel rocket projectile systems, rocket design, and a brilliant electronic engineer as well. High enough subordinates call him Wellie. Pilots always called him Professor Bannister. I issued the report that was read in closed session in London in which I accused Bannister of murdering Lynds. That's how come I'm here now. I was cashiered out, just short of a general court martial. That's one of the nice parts about truly classified work. They can't make you out an idiot in public. Living on a boat in the Mediterranean is far nicer than looking up at the earth through a porthole in a smashed up ship on the moon, you must admit.

Well, Bannister could have well counted chickens on that launching. The first, second and third stages fired off perfectly, and within fourteen minutes the capsule detached into orbit just under escape velocity. The orbit was enormously far out. They let Lynds complete a single orbit, then fired the capsule's rockets. He ran off tangential to orbit at escape velocity on a pattern that would probably run in a straight path to infinity. In fact, the capsule is probably still on its way, and as I said, it's six years now. After four minutes, the return vehicle was activated and as it broke away from the capsule, Lynds blacked out for twenty seconds. That was the only time I was out of direct contact with him after he went into orbit.

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"Now do you understand about the manual controls?" Bannister said.
"He'll come out of it in less than a minute."
"One can never be sure."
"There's still no reason why you can't use duplicate control systems."
"With a switch-off on the automatic, if they fail?"
"Yes. If for nothing more than to give a man a chance to save his own neck."
"They won't fail."
"The simplest things fail, Bannister. Campbell was killed in a far less elaborate way."
He looked at me. "Campbell? Oh, yes. The landing over the reef. I had nothing to do with that."
"You designed the power shut-off that failed."
"Improper servicing. A simple mechanical failure."
"Or the inability of a mechanism to compensate. The wind shifted after computer coordination. A pilot can feel it. Your instruments can't. There was no failure, there. The shut-off worked perfectly and Campbell was killed because of it."

I watched the tracking screen, listened to the high keening noises coming from the receivers. The computers clicked rapidly, feeding out triangulated data on the positions of the escape vehicle and the capsule. The capsule had been diverted from its path slightly by reaction to the vehicle's ejection. Its speed, however, was increasing as it moved farther out. The vehicle with Lynds was in a path parabolic to the capsule, almost like the start of an orbit, but at a fantastic distance. He was, of course, traveling at escape velocity or better, and you do not orbit at escape velocity.

* * * * *

"Harry. Harry, how long was I out?" We heard Lynds' voice come alive suddenly through the crackling static.
"Hello, Dennis. Listen to me. How are you?"
"I'm fine, Harry. What's wrong? How long was I out?"
"Nothing is wrong. You were out less than half a minute. The ejection gear worked perfectly."
"That's good."

The tension left his voice and he settled back to a checking and rechecking of instruments, reactions and what he would see. They activated the scanner. The transmitting equipment brought us a view that was little more than a spotty blackness. But I think the equipment was not working properly. You see, what Lynds said did not quite match what we saw. They later used the recording of his voice together with an affidavit sworn to by a technician that our receiver was operating perfectly, as evidence in my hearing. They proved, in their own way, that Lynds had suffered continual delirium after blacking out. The speed, they said, was the cause. It became known as Danger V. Nobody ever bothered to explain why I never encountered the phenomenon of Danger V. It became official record, and my experience was the deviant. It was Bannister's alibi.

We watched the spotty blackness on the screen and listened to Lynds.
"Harry, I can see it all pretty well now," he began. "There's slight spin on this bomb so it comes and goes. About sixty second revolutions. Nice and slow. Terribly nauseating to look at. But I'm feeling fine now, better than fine. Give me a stick and I'll move the Earth. Who was it said that? Clever fellow. You say I was out about half a minute. That makes it about three more minutes until Bannister's controls are supposed to bring me back."
"Yes, Dennis, but what do you see? Do you hear me? What do you see?"
"Let me tell you something, Harry," he said. "They aren't going to work. They're not wrecked or anything. I just know they aren't worth sweet damn all. Like when Campbell had it. He knew it was going to happen. You can trust
the machines just so long. After that, you're batty to lay anything on them at all. But can you see the screen? There it is again. We're turning into view. I can see the earth now. The whole of it."

There was silence then. We looked at the screen but saw only the spotty blackness. I looked from the screen to the speaker overhead, then back at the screen. I looked about the control room. Everyone was doing his work. The instruments all were working. The computers were clicking and nobody looked particularly alarmed, except one other pilot who was there too, Forrest. Maybe Forrest and I pictured ourselves in Lynds' place. Maybe we both had the same premonitions. Maybe we both held the dislike and distrust of the rest of them. Maybe a lot of things, but one thing was sure. The papers would never get hold of this story, and because of that, Bannister and the rest of them didn't really care a hang about Lynds or me or Forrest or any of the others that might be up there.

It seemed an age passed until we heard Lynds again. The tape later showed it was no more than half a minute. "Bannister, can you hear me?" he said suddenly. "Bannister, do you know what it feels like to be tied into a barrel and tossed over Victoria Falls? Do you? That's what it's like out here. Not that you care a damn. You'll never come up here, you're smart enough for that. Give me a paddle, Bannister, that's what I want. It's no more than a man in a barrel deserves. It's black out here, black and there's nothing to stand on. The earth looks like a flat circle of light and very big, but it doesn't make me feel any better. These buggies of yours won't be any use to anybody until you let the pilot do his own work. I crashed once, in a Gypsy Moth, with my controls all shot away by an overenthusiastic Russian fighter pilot near the Turkish border. Coming down, I felt the way I do now.

"Look at the instruments and remember, Bannister. My reflexes are perfect. There's nothing wrong with me. I could split rails with an axe now, if I had an axe. An axe or a paddle. Harry, I'm not getting back down in one piece. Somehow, I know it. Don't you let them do it to anyone else unless there are manual controls from the ejection onwards. Don't do it. This isn't just nosing into the Slot, over the reef between the town and the island and letting go then, and beginning to sweat. This is much more, Harry. This is bloody frightening. Are the three minutes up yet? My stomach is crawling at the thought of you pushing that button and nothing happening. Listen, Bannister, you're not getting me down, so forget any assurances. I hope they never let you put anybody else up here like this. It's black again. We've swung away."

Bannister looked at my eyes. "It's almost time," he said.

Eight seconds later they pushed the button. Perhaps it would have been better if nothing happened then. But that part worked. They got him out of the parabolic curve and headed back down. They fired reverse rockets that slowed him. They threw him into a broad equatorial orbit and let him ride. It took over an hour to be sure he was in orbit. I admired them that, but began to hate them very much. They ascertained the orbit and began new calculations.

* * * * *

The escape vehicle was a small delta shaped craft. The wings, if one could call them that, spanned just under seven feet. They planned to bring him down in a pattern based on very orthodox principles of flight. There remained sufficient fuel for a twelve second burst of power. This would decelerate the craft to a point where it would drop from orbit and begin a descent. I later utilized the same pattern by letting down easy into the atmosphere after the power ran down and sort of bouncing off the upper layers several times to further decelerate and finally gliding down through it at about Mach 5, decelerating rapidly then, almost too rapidly, and finally passing through the exosphere into the ionosphere. The true stratosphere begins between sixty and seventy miles up, and once you've passed through that level and not burnt up, the rest of it is with the pilot and his craft.

It takes hours. I came down gradually, approaching within striking distance west of Australia, then finally nosed in and took my chance on stretching it to one of the ten mile strips for a powerless landing. I did it in Australia. But if I had not had orthodox controls, had I even gotten that far, I would have churned up a good part of the Coral Sea between Sydney and New Zealand. You see, you've got to feel your way down through all that. That's the better part of flying, the "feel" of it. Automatic controls don't possess that particular human element. And let me tell you, no matter what they call it now--space probing, astronauts or what have you--it's still flying. And it's still men that will have to do it, escape velocity or no. Like they talk about push-button wars, but they keep training infantry and basing grand strategy on the infantry penetration tactics all down through the history of warfare. They call Clausewitz obsolete today, but they still learn him very thoroughly. I once discussed it with Bannister. He didn't like Clausewitz. Perhaps because Clausewitz was a German before they became Nazis. Clausewitz would not look too kindly on a commander whose concern with a battle precluded his concern for his men. He valued men very highly. They were the greatest instrument then. They still are today. That's why I can't really make too much out of the monkey. I feel pretty rotten about him and all that. But the monkey up there means a man someplace is still down here.

Anyway, after Lynds completed six orbital revolutions, they began the deceleration and descent. The whole
affair, as I said, was very solidly based on technical determinations of stresses, heat limits, patterns of glide, and
Bannister's absolute conviction that nothing would let go. The bitter part was that it let go just short of where Lynds
might have made it. He was through the bad part of it, the primary and secondary decelerations, the stretches where
you think if you don't fry from the heat, the ship will melt apart under you, and the buffeting in the upper levels
when ionospheric resistance really starts to take hold. And believe me, the buffeting that you know about, when you
approach Mach 1 in an after-burnered machine, is a piece of cake to the buffeting at Mach 5 in a rocket when you hit
the atmosphere, any level of atmosphere. The meteorites that strike our atmosphere don't just burn up, we know that
now. They also get knocked to bits. And they're solid iron.

Lynds was about seventy miles up, his velocity down to a point or two over Mach 2, in level flight heading east
over the south Atlantic. From about that altitude, manual controls are essential, not just to make one feel better, but
because you really need them. The automated controls did not have any tolerance. You don't understand, do you?
Look, when one flies and wants to alter direction, one applies pressure to the control surfaces, altering their
positions, redirecting the flow of air over the wings, the rudder and so forth. Now, in applying pressure, you
occasionally have to ease up or perhaps press a bit more, as the case may be, to counteract turbulence, shift in air
current, or any of a million other circumstances that can occur. That all depends on touch. It's what makes some
flyers live longer than others. It's like the drag on a fishing reel. You set it tight or loose according to the weight of
the fish you're playing. When you reel in, the line can't become too tight or it will snap, so you have the drag. It's
really quite ingenious. It lets the fish pull out line as you reel in. It's the degree of tolerance that makes it work well
as an instrument. In flying, the degree of tolerance, the compensating factor is in man's hands. In the atmosphere, it's
too unpredictable for any other way.

Well, they calculated to set the dive brakes at twelve degrees at the point where Lynds was. Lynds saw it all.
"This is more like my cup of tea," he said at that point. "Harry, the sky is a strange kind of purple black up
here."

"They're going to activate the brakes, Den," I said. "What's it like?"

"Not yet, Harry. Not yet."
I looked at Bannister. He noted the chart, his finger under a line of calculations.
"The precise rate of speed and the exact instant of calculation, Captain Jackson," Bannister said. "Would you
care to question anything further."

"He said not yet," I told him.

"Therefore you would say not yet?"

"I would say this. He's about in the stratosphere. He knows where he is now. He's one of the finest pilots in the
world. He'll feel the right moment better than your instruments."

"Ridiculous. Fourteen seconds. Stand by."

"Wait," I said.

"And if we wait, where does he come down, I ask you? You cannot calculate haphazardly, by feel. There are
only four points at which the landing can be made. It must be now."
I flipped the communications switch, still looking at Bannister.

"This is it, Den. They're coming out now."

"Yes, I see them. What are they set for?"

"Twelve degrees."

"I'm dropping like a stone, Harry. Tell them to ease up on the brake. Bannister, do you hear me? Bring them in
or they'll tear off. This is not flying, anymore." His voice sounded as if he was having difficulty breathing.

"Harry," he called.

They held the brakes at twelve degrees, of course. The calculations dictated that. They tore away in fifteen
seconds.

"Bannister! They're gone," Dennis shouted. "They're gone, Bannister, you butcher. Now what do you say?"

Bannister's face didn't flinch. He watched the controls steadily.

"Try half-degree rudder in either direction," I said.

Bannister looked at me for a second. "His direction is vertical, Captain. Would you attempt a rudder
manipulation in a vertical dive?"

"Not a terminal velocity drive, Bannister. He said it's not flying anymore. Lord knows which way he's falling."

"So?"

"So I'd try anything. You've got to slow him."

"Or return him to level flight."

"At this speed?"
We both looked at the controls now. The ship was accelerating again, and dropping so rapidly I couldn't follow
the revolutions counter.

"Engage the ailerons," Bannister ordered. "Point seven degrees, negative."

Dennis came back on. "Harry, what are you doing? The ship is falling apart. The ailerons. It won't help. Listen,
Harry, you've got to be careful. The flight configuration is so tenuous, anything can turn this thing into a falling
stone. It had to happen, I knew, but I don't want to believe it now. This sitting here with that noise getting louder. It's
spiraling out at me, getting bigger. Now it's smaller again. I'm afraid, Harry. The ailerons, Harry, they're gone. Very
tenuous. They're gone. I can't see anything. The screens are black. No more shaking. No more noise. It's quiet and I
hear myself breathing, Harry. Harry, the wrist straps on the suits are too tight. And the helmet, when you want to
scratch your face, you can go mad. And Harry--"

* * * * *

That was the end of the communications. Something in the transmitter must have gone. They never found out.
He didn't hit until almost a minute later, and nobody ever saw it. The tracking screen followed him down very
precisely and very silently. There was no retrieving anything, of course. You don't conduct salvage operations in the
middle of the south Atlantic.

* * * * *

I turned in my report after that. No one had asked for it, so it went through unorthodox channels. It took an
awfully long time and my suspension did not become effective until after the second shot. I was the pilot on that
one, you know. I got them to install the duplicate controls, over the insistence by Bannister that resorting to them,
even in the event that it became necessary, would prove nothing. He even went as far as to talk about load
redistribution electric control design. As a matter of fact, I thought he had me for a while, but I think in the end they
decided to try to avoid the waste of another vehicle. At least, that might be the kind of argument that would carry
weight. The vehicles were enormously expensive, you realize.

I made it all right, as I said. It took me nine hours and then some, once they dropped me from orbit. I switched
off the automatic controls at the point where the dive brakes were to have been engaged. This time, the brakes had
not responded to the auto controls and they did not open at all. I found out readily enough why Lynds was against
opening them at that point. Metal fatigue had brought the ship to a point where even a shift in my position could
cause it to stop flying.

I came down in Australia and the braking 'chute tore right out when I released it. I skidded nine miles. A Royal
Australian Air Force helicopter picked me up two hours later.

I learned of the suspension while in the hospital. I didn't get out until just in time to get to London for the
hearing. My evidence and Forrest's, and Lynds' recorded voice all served to no purpose. You don't become a hero by
proving an expert wrong. It doesn't work that way. It would not do to have Bannister looked upon as a bad gambit,
not after all they went through to stay in power after putting him in. The reason, after all, was all in the way you
looked at it. And a human element could always be overlooked in the cause of human endeavor. Especially when the
constituents never find out about it.

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After that, they started experimentation with powered returns. The atmosphere has been conquered, and now
there remained the last stage. They never did it successfully. They couldn't. But it did not really matter. What it all
proved was that they did not really need pilots for what Bannister was after. He had started with a premise of testing
man's reactions to space probes under actual conditions, but what he was actually doing was testing space probes
alone, with man as a necessary evil to contend with to give the project a reason.

It was all like putting a man in a racing car traveling flat out on the Salt in Bonneville, Utah. He'll survive, of
course. But put the man in the car with no controls for him to operate and then run the thing completely through
remote transmission, and you've eliminated the purpose for the man. Survival as an afterthought might be a thing to
test, if you didn't care a hoot about man. Survival for its own sake doesn't mean anything unless I've missed the
whole point of living, somewhere along the line.

Bannister once described to me the firing of a prototype V-2. The firing took place after sunset. When the
rocket had achieved a certain altitude, it suddenly took on a brilliant yellow glow. It had passed beyond the shadow
of the earth and risen into the sunlight. Here was Bannister's passion. He was out to establish the feasibility of
putting a rocket vehicle on the moon. It could have a man in it, or a monkey. Both were just as useless. Neither
could fly the thing back, even if it did get down in one piece. It could tell us nothing about the moon we didn't
already know. Getting it down in one piece, of course, was the reason why they gave Bannister the project to begin
with.

So Bannister is now a triumphant hero, despite the societies for the prevention of cruelty to animals. But
nobody understood it. Bannister put a vehicle on the moon. We were the first to do it. We proved something by
doing nothing. Perhaps the situation of true classified information is not too healthy a one, at that. You see, we've had rockets with that kind of power for an awfully long time now. Maybe some of them know what he's up to. When I think about that, I really become frightened.

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The monkey, I suppose, is dead. The most we can hope for is that he died fast. It's very like another kind of miserable hope I felt once, a long time ago, for a lot of people who could be offered little more than hope for a fast death, because of something somebody was trying to prove. There's some consolation this time. It's really only a monkey.

This I know, they'll never publish a picture of the vehicle. Someone might start to wonder why the cabin seems equipped to carry a man.

* * * *

When you're out in a clear night in summer, the sky looks very friendly, the moon a big pleasant place where nothing at all can happen to you. The vehicle used in Project Argus had a porthole. I can't imagine why. The monkey must have been able to see out the porthole. Did he notice, I wonder, whether the earth looks friendly from out there.

THE END
GOD, MACHINE—OR LISTENING POST FOR OUTSIDERS?

Horng sat opposite the tiny, fragile creature who held a microphone, its wires attached to an interpreting machine. He blinked his huge eyes slowly, his stiff mouth fumblingly forming words of a language his race had not used for thirty thousand years.

"Kor was … is … God … Knowledge." He had tried to convey this to the small creatures who had invaded his world, but they did not heed. Their ill-equipped brains were trying futilely to comprehend the ancient race memory of his people.

Now they would attempt further to discover the forbidden directives of Kor. Horng remembered, somewhere far back in the fossil layers of his thoughts, a warning. They must be stopped! If he had to, he would stamp out these creatures who were called "humans."

CAST OF CHARACTERS

Rynason
His mental quest led him too close to a dangerous secret.

Manning
His ideas for colonizing that world didn’t include survival for its native beings.

Malhomme
This ruffian-preacher could be the one man that everyone might have to trust.

Mara
She wanted to save the aliens, but did they want to be saved?

Horng
In the recesses of his brain was the key to a dead civilization—or a live menace….

Kor
Was it a legend, a king, a thing, or a trap from another galaxy?

ONE

Lee Rynason sat forward on the faded red-stone seat, watching the stylus of the interpreter as the massive grey being in front of him spoke, its dry, leathery mouth slowly and stumblingly forming the words of a spoken language its race had not used for over thirty thousand years. The stylus made no sound in the thin air of Hirlaj as it passed over the plasticene notepaper; the only sounds in the ancient building were those of the alien’s surprisingly high and thin voice coming at intervals and Rynason’s own slightly labored breathing.

He did not listen to the alien’s voice—by now he had heard it often enough so that it was merely irritating in its thin dryness, like old parchments being rubbed together. He watched the stylus as it jumped along sporadically:

TEBRON MARL WAS OUR … PRIEST KING HERO. NOT PRIEST BUT ONE WHO KNEW … THAT IS PRIEST.

Rynason calculated quickly. Translating that to about 8200 Earth-standard years and subtracting, that would make it about the seventeenth century. About the time of the Restoration in England, when the western hemisphere
of Earth was still being colonized. Eighteen generations ago on Hirlaj. He read the date into the mike for the stylus to record, and sat back and stretched.

They were sitting amid the ruins of a vast hall, grey dust covering the stone floor all around them. Dry, hard vegetation had crept in through cracks and breaks in the walls and fallen across the dusty interior shadows of the building. Occasionally a small, quick animal would dart from a dark wall across the floor to another shadow, its feet soundless in the dust.

Above Rynason the enormous arch of the Hirlaji dome loomed darkly against the deep cerulean blue of the sky. The lines of all Hirlaji architecture were deceptively simple, but Rynason had already found that if he tried to follow the curves and angles he would soon find his head swimming. There was a quality to these ancient buildings which was not quite understandable to a Terran mind, as though the old Hirlaji had built them on geometric principles just slightly at a tangent from those of Earth. The curve of the arch drew Rynason’s eyes along its silhouette almost hypnotically. He caught himself, and shook his head, and turned again to the alien before him.

The creature’s name, as well as it could be rendered in a Terran script, was Horng. The head of the alien was dark and hairless, leathery, weathered; the light wires of the interpreter trailed down and across the floor from where they were clamped to the deep indentations of the temples. Massive boney ridges circled the shadowed eyes set low on the head, directly above the wide mouth which always hung open while the Hirlaji breathed in long gulps of air. Two atrophied nostrils were situated on either side and slightly below the eyes. The neck was so thick and massive that it was practically nonexistent, blending the head with the shoulders and trunk, on which the dry skin stretched so thin that Rynason could see the solid bone of the chest wall. Two squat arms hung from the shoulders, terminating in four-digit hands on which two sets of blunt fingers were opposed; Horng kept moving them constantly, in what Rynason automatically interpreted as a nervous habit. The lower body was composed of two heavily-muscled legs jointed so that they could move either forward or backward, and the feet had four stubby but powerful toes radiating from the center. The Hirlaji wore a dark garment of something which looked like wood-fibre, hanging from the head and gathered together by a cord just below the chest-wall.

Rynason, since arriving on the planet three weeks before as one of a team of fifteen archaeological workers, had been interviewing Horng almost every day, but still he often found himself remembering only with difficulty that this was an intelligent being; Horng was so slow-moving and uncommunicative most of the time that he almost seemed like a mound of leather, like a pile of hides thrown together in a corner. But he was intelligent, and in his mind he held perhaps the entire history of his race.

Rynason lifted the interpreter-mike again. "Was Tebron Marl king of all Hirlaj?"

Horng’s eyes slowly closed and opened. TEBRON MARL WAS RULER LEADER IN THE REGION OF MINES. HE UNITED ALL OF HIRLAJ AND WAS PRIEST RULER.

"How did he unite the planet?"

TEBRON LIVED AT THE END OF THE BARBARIC AGE. HE CONQUERED THE PLANET BY VIOLENCE AND DROVE THE ANCIENT PRIEST CASTE FROM THE TEMPLE.

"But the reign of Tebron Marl is remembered as an era of peace."

WHEN HE WAS PRIEST KING HE HELD THE PEACE. HE ENDED THE BARBARIC AGE.

Rynason suddenly sat forward, watching the stylus record these words. "Then it was Tebron who abolished war on Hirlaj?"

YES.

Rynason felt a thrill go through him. This was what they had all been searching for—the point in the history of Hirlaj when wars had ceased, when the Hirlaji had given themselves over to completely peaceful living. He knew already that the transition had been sharp and sudden. It was the last question mark in the sketchy history of Hirlaj which the survey team had compiled since its arrival—how had the Hirlaji managed so abruptly to establish and maintain an era of peace which had lasted unbroken to the present?

It was difficult even to think of these huge, slow-moving creatures as warriors ... but warriors they had been, for thousands of their years, gradually building their culture and science until, apparently almost overnight, the wars had ceased. Since then the Hirlaji moved in their slow way through their world, growing more complacent with the passage of ancient generations, growing passive, and, eventually, decadent. Now there were only some two dozen of the race left alive.

They were telepathic, these leathery aliens, and behind those shadowed eyes they held the entire memories of their race. Experiences communicated telepathically through the centuries had formed a memory pool which each of the remaining Hirlaji shared. They could not, of course, integrate in their own minds all of that immense store of memories and understand it all clearly ... but the memories were there.

It was at the same time a boon and a trial for Rynason and the rest of the survey team. They were trained archaeologists ... as well schooled as possible on the worlds of this far-flung sector near the constantly outward-
moving Edge, the limit of Terran expansion. Rynason could operate and if necessary repair the portable carbondaters of the team, he knew the fine points of excavation and restoration of artifacts and had studied so many types of alien anatomy that he could make at least an educated guess at the reconstruction of beings from fragmentary fossil-remains or incomplete skeletons … or exoskeletons.

But the situation on Hirlaj was one which had never before been encountered; here he was not dealing with a dead race’s remains, but directly with members of that race. It was not a matter of sifting fragmentary evidence of science, crafts and customs, finding out what he could and piecing together a composite picture from the remains at hand, as they had done with the artifacts of the Outsiders, those unknown beings who had left the ruins of their outposts and colonies in six galaxies already explored and settled by the Earthmen; all he had to do here was ask the right questions and he would get his answers.

Sitting there under that massive dome, with the quiet-eyed alien before him, Rynason couldn’t completely suppress a feeling of ridiculousness. The problem was that the Hirlaji could not be depended upon to be able to find a particular memory-series in their minds; the race memory was such a conglomeration that all they could do was strike randomly at memories until the correct area was touched, and then follow up from there. The result was usually irrelevant and unrelated information.

But he seemed to be getting somewhere now. Having spent three weeks with Horng, gradually learning a little about the ways of his alien mind, he had at last run across what might be the important turning-point in the history of Hirlaj.

Horng spoke, and Rynason turned to watch the stylus of the interpreter as it moved across the paper. TEBRON SPENT HIS YEARS BRINGING HIRLAJ TOGETHER. FIRST BY CONQUEST THEN BY … LEADERSHIP LAW. HE FORBADE … SCIENCES QUESTINGS EXPLORATIONS WHICH DREW HIRLAJ APART.

"What were these sciences?"

Horng closed and opened his eyes. MANY OF THEM ARE FORGOTTEN.

Rynason looked up at the alien, who sat quietly on a rough stone benchlike seat. "But your race doesn’t forget." THE MEMORIES ARE VERY FAR BACK AND ARE HARD TO FIND. THERE HAS BEEN NO EFFORT TO RETAIN CERTAIN MEMORIES.

"But you can remember these if you try?"

Horng’s head dipped to one side, a characteristic movement which Rynason had not yet managed to interpret. The shadowed, wrinkled eyes closed slowly. THE MEMORIES ARE THERE. THEY ARE THE SCIENCES OF KOR. MANY OF THEM ARE WARLIKE SCIENCES.

"You’ve mentioned Kor before. Who was he?"

KOR WAS IS GOD KNOWLEDGE.

Rynason frowned. The interpreter automatically translated terms which had no reliable parallel in Terran by giving two or three related words, and usually the concept was fairly clear. Not quite so with this sentence. "God and knowledge are two different words in our language," he said. "Can you explain your term more fully?"

Horng shifted heavily on his seat, his blunt fingers tapping each other. KOR WAS IS EXISTENCE WHICH WE WORSHIP OBEY ADMIRE FOLLOW. ALSO ESSENCE CONCEPT OF KNOWLEDGE SCIENCE QUESTING.

Rynason, watching the stylus, pursed his lips. "Mm," he said softly, and shrugged his shoulders. Kor was apparently some sort of god, but the interpreter didn’t seem capable of translating the term precisely.

"What were the sciences of Kor?"

There was a silence as the stylus finished moving across the paper, and Rynason looked up at Horng. The alien’s eyes were closed and he had stopped the constant motion of his leathery grey fingers; he sat immobile, like a giant statue, almost a part of the complex of the hall and the crumbling domed building. Rynason waited.

The silence remained for a long time in the dry air of the empty hall. Rynason saw from the corner of his eye one of the dark little scavengers darting out of a gaping window. He could almost hear, it seemed, the noise of the brawling, makeshift town the Earthmen had established a little less than a mile away from the Hirlaji ruins, where already the nomads and adventurers and drifters had erected a cluster of prefab metal buildings and were settling in.

"What were the sciences of Kor?" Rynason asked again, not wanting to think of the cheapness and dirt of the Earth outpost which huddled so near to the Hirlaji domes.

He felt Horng’s quiet gaze, heavy with centuries, resting on him. THEY WERE ARE THOSE SCIENCES QUESTINGS WHICH KOR PROCLAIMED INFORMED WERE SACRED PART OF THE ESSENCE.

"Part of Kor?"

Horng’s head dipped to one side. APPROXIMATELY.

"How is this known? Tebron broke the power of the priesthood, didn’t he?"
TEBRON REPLACED THE PRIESTS. THE KNOWLEDGE WAS GIVEN TO TEBRON.
"Including the information that these sciences were prohibited?"

Horgn shifted forward, like a massive block of stone wavering. His fingers moved briefly and then rested. THE
MEMORIES ARE BURIED DEEPLY. TEBRON PROCLAIMED THIS PROHIBITION AFTER
COMMUNICATING WITH KOR.

Rynason’s head jerked up from the interpreter. "Tebron spoke with Kor?"
After a pause, Horgn’s dry voice came. APPROXIMATELY. THERE WAS … COMMUNICATION
RAPPORT. TEBRON WAS KING PRIEST.

"Then Tebron made this prohibition in the name of Kor. When did this occur?"

THE KNOWLEDGE PROHIBITION WAS COMMUNICATED TO HIRLAJ WHEN TEBRON ASSUMED
POWER RIGHT.

"The same day?"

THE DAY AFTER. TEBRON COMMUNICATED WITH KOR IMMEDIATELY AFTER OUSTING
REPLACING THE PRIESTS.

Rynason watched Horgn’s replies as they were recorded by the interpreter; he was frowning. So this dawn-era
king was supposed to have spoken, perhaps telepathically, with the god of the Hirlaji. Could he have simply claimed
to have done so in an effort to stabilize his own power? But the fact that this race was telepathic threw some doubt
on that supposition.

"Are there memories of Tebron’s conversation with Kor?" he asked.

Horgn’s eyes closed and opened in acknowledgement, and then abruptly the alien rose to his feet. He moved
slowly past Rynason to the base of a long, sweeping flight of stairs which led upward toward the empty dome,
trailing the wires of the interpreter. Rynason moved to unplug the wires, but Horgn stopped at the base of the stairs,
looking up along the curving ramp to where it ended in a blunt, weathered break two-thirds of the way up. Rubble
lay below the break.

Rynason watched the grey being staring silently up those broken steps, and asked softly, "What are you doing?"
Horgn, still gazing upward, dipped his head to one side. THERE IS NO PURPOSE. He turned and came slowly
back to his stone seat.

Rynason grinned wryly. He was beginning to get used to such things from Horgn, whose mind often seemed to
run in non sequiturs. It was as though the alien’s perceptions of the present were as jumbled as the welter of
memories he held. Crazy old mound of leather.

But he was not crazy, of course; his mind simply ran in a way that was alien to the Earthmen. Rynason was
beginning to learn to respect that alien way, if not to understand it.

"Are there memories of Tebron’s conversation with Kor?" Rynason asked again.

TEBRON COMMUNICATED WITH KOR IMMEDIATELY AFTER OUSTING THE PRIESTS. IT
OCURRED IN THE TEMPLE.

"Are there memories of what was said?"

Horgn sat silently, perhaps in thought. His reply didn’t come for several minutes.

THE MEMORIES ARE BURIED DEEPLY.

"Can you remember the actual communication?"

Horgn’s head tilted to one side in a peculiarly strained fashion; Rynason could see a muscle jumping where the
alien’s neck blended with his torso. THE MEMORIES ARE BURIED SO DEEPLY. I CANNOT REACH THEM.

Rynason gazed pensively at the interpreter as these words were recorded. What could have happened during
that conversation that would have caused its memory to be so deeply buried?

"Can you find among any of the rest of Tebron’s memories any thoughts about Kor?"

YES. TEBRON HAD MEMORIES THAT HE HAD COMMUNICATED WITH KOR, BUT THESE ARE
FLEETING. THERE IS NOTHING CLEAR.

The Hirlaji was shaking, his entire body trembling with some sort of tension which even communicated itself
through the interpreter, causing the stylus to quaver and jump forward, dragging a jagged line across the paper.
Rynason stared up at the alien, feeling a chill down his back which seemed to penetrate through to his chest and
lungs. This massive creature was shaking like the rumbling warnings of an earthquake, his eyes cast downward from
the deep shadows of their sockets; Rynason could almost feel the weight of their gaze like a heavy, dark blanket. He
lifted the interpreter’s mike slowly.

"Your race does not forget," he said softly. "Why can’t you remember this conversation?"

Horgn’s four-digit hands clasped tightly and the powerful tendons stood starkly on the heavy wrists as
Horgn drew in long breaths of air, the sound of his breathing loud in the great space under the dome.

THERE IS NOTHING CLEAR. THERE IS NOTHING CLEAR.
TWO

The Earthman called the town Hirlaj too, because the spaceport was there. It was a new town, only a few months old, but the gleaming alloys of the buildings were already coated with dirt and pitted by the frequent dust storms that swept through. Garbage littered the alleys; its odor was strange but still foul in the alien atmosphere. The small, darting creatures were here too, foraging in the alleys and the outskirts of the town, where the streets ended in garbage heaps and new cemeteries or faded into the trackless flat where the spacers touched down.

The Earthmen filled the streets … drinking, fighting, laughing and cursing, arguing over money or power or, sometimes, women. The women here were hard and self-sufficient, following the path of Terran expansion in the stars and taking what they felt was due them as women or what they could get as men. Supply houses did a thriving business, their prices high between shipments on the spacers from the inner worlds; bars and gambling houses stayed open all night; rooming houses and restaurants and laundries displayed crude handlettered signs along the streets.

Rynason pushed his way through a jostling crowd outside the door of a bar. He was supposed to meet the head of his Survey team here—Rice Manning, who had been pushing the survey as hard as he could since the day they’d set foot on Hirlaj. Manning was hard and ambitious—a leader of men, Rynason thought sardonically as he surveyed the tables in the dim interior. The floor of the bar was a dirty plastic-metal alloy, already scuffed and in places bloodstained. The tables were of the cheap, light metals so common on the spacer-supplied worlds of the Edge, and they wobbled.

The low-ceilinged room was crowded with men. Rynason didn’t know many of them by name, but he recognized a lot of the faces. The men of the Edge, though they lacked money, education, often brains and usually ethics, at least had the quality of distinctiveness: they didn’t fit the half-dozen convenient molds which the highly developed culture of the inner worlds fitted over the more civilized citizens of the Terran Federation. These men were too self-interested to follow the group-thoughts which controlled the centers of empire, and the seams and wrinkles of their faces stamped a rough kind of individuality even more visually upon them.

Of them all, the man who was instantly recognizable in any crowd like this was Rene Malhomme; Rynason immediately saw the man in one corner of the room. He stood six and a half feet tall, heavily muscled and a bit wild-eyed; his greying hair fell in disorder over his dirty forehead and sprayed out over his ears. He was surrounded by laughing and shouting men; Manning couldn’t tell from this distance whether he was engaged in one of his usual heated arguments on religion or in his other avocation of recounting stories of the women he had "converted". He waved a black-lettered sign saying REPENT! over his head—but then, he always did.

Rynason found Manning in the back, sitting under a cheap print of a Picasso nude with cold light trained on it in typically bad taste. He had a woman with him. Rynason recognized her—Mara Stephens, in charge of communications and supplies for the survey team. She was a strange girl, aloof but not hard, and she carried herself with a quiet dignity. What was she doing with Manning?

He passed a waiter on his way to the table and ordered a drink. Malhomme saw him as he passed: "Lee Rynason! Come and join me in repentance! Give your soul to God and your money to the barman, for as the prophet sayeth, lo, I am dry! Join us!"

Rynason grinned and shook his head, walking past. He grabbed one of the light-metal chairs and sat down next to Mara.

"You wanted to see me," he said to Manning.

Manning looked up at him to apparent surprise. "Lee! Yes, yes—sit down. Wait, we’ll get you a drink."

So he was in that kind of a mood. "I’ve got one coming," Rynason said. "What’s our problem today?"

Manning smiled broadly. "No problem, Lee; no problem at all. Not unless you want to make one." He chuckled goodnaturedly, a tacit statement that he was expecting no such thing. "I’ve got good news today, by god. You tell him, Mara."

Rynason turned to the girl, who smiled briefly. "It just came over the telecom," she said. "Manning has a good chance for the governorship here. The Council is supposed to announce its decision in two weeks."

Rynason looked over at Manning, his face expressionless. "Congratulations. How did this happen?"

"I’ve got an inside track; friend of mine knows several of the big guys. Throws parties, things like that. He’s being put in a word for me, here and there."

"Isn’t this a bit out of your line?" Rynason said.

Manning sat back, a large man with close-cropped dark hair and heavy features. His beard was trimmed to a thin line along the ridge of his jaw—a style that was popular on the inner worlds, but rarely seen here on the Edge. "This is my line," he said. "God, this is what I was after when I took this damned job. Survey teams are a dime a dozen out here, Lee; it’s no job for a man."

"We’ve got sort of a special case here," Rynason said evenly, glancing at Mara. She smiled at him. "We haven’t
run into any alien races before that were intelligent."

Manning laughed, and took a long swallow of his drink. "Twenty-six lousy horsefaces—now there’s an important discovery for you. No, Lee, this is peanuts. For that matter, they may be running into intelligent aliens all over the Edge by now—communication isn’t so reliable out here that we’d necessarily know about it. What we’ve found here isn’t any more important than all the rubble and trash the Outsiders left behind."

"Still, it is unique so far," Mara said.

"I’ll tell you exactly how unique it is," Manning said, leaning forward and setting down his glass with a bang. "It’s just unique enough that I can make it sound important in my report to the Council. I can make myself sound a little impressive. That’s how important it is; no more than that."

Rynason pursed his lips, but didn’t say anything. The waiter arrived with his drink; he threw a green coin onto the table which was scooped up before it had finished ringing to a stop, and sat back with the glass in his hand.

"Is that your pitch to the Council?" he asked. "You’re telling them that Hirlaj is an important archaeological area and that’s why you should get the governorship?"

"Something like that," Manning nodded. "That, and my friend at Seventeenth Cluster headquarters. Incidentally, he’s an idiot and a slob—turns on quadsense telemuse instead of working, drinks hopsbrau from his own sector. I can’t stand him. But I did him a few favors, just in case, and they’re paying off."

"I think it’s marvelous the way our frontier policy caters to the colonists," Mara said quietly. She was still smiling, but it was an ironic smile which suddenly struck Rynason as characteristic of her.

He knew exactly what she meant. Manning’s little push for power was nothing new or shocking in Terran frontier politics. With the rapid expansion of the Edge through the centuries, the frontier policy of the Confederation had had to adapt itself to comparatively slipshod methods of setting up governments in the newly-opened areas. Back in the early days they’d tried sending out trained men from each Cluster headquarters, but that had been foredoomed to failure: travel between the stars was slow, and too often the governors had arrived after local officialdoms had already been established, and there had been clashes. The colonists had almost always backed the local governments, and there were a few full-scale revolts when the system had been backed too militantly by Cluster headquarters.

So the Local Autonomy System had been sanctioned. The colonists would always support their own men, who at least knew conditions in the areas they were to govern. But since this necessarily limited the choice of Edge governorships to the roustabouts and drifters who wandered the outworlds, the resulting administrations were probably even more corrupt than they had been under the old system of what had amounted to centralized graft. The Cluster Councils retained the power of appointing the local governors, but aside from that the newly-opened worlds of the Edge were completely under their own rule. Some of the more vocal critics of the Local Autonomy System had dubbed it instead the Indigenous Corruption System; it was by now a fairly standard nickname in the outworlds.

The system made for a wide-open frontier—bustling, wild, hectic, and rich. For the worlds of the Edge were untamed worlds, raw and forbidding, and the policy of the Councils was calculated to attract the kind of men who not only could but would open these frontiers. The roustabouts, the low drifters of the spaceways… men who were hard and strong from repeated knocks, who were looking for a way to work or fight their way up. The lean and hungry of the outworlds.

Rynason glanced across the table at Manning. He was neither lean nor hungry, but he had that look in his eyes. Rynason had been around the Edge for years—his father had travelled the spacers in the commercial lines—and he had seen that look on many men, in the fields and mines, in the spaceports, in the quickly-tarnished prefab towns that sprang up almost overnight when a planetfall was made. He could recognize it on Manning despite the man’s casual, self-satisfied expression.

"You don’t have to worry about the colonists here," Manning was saying to the girl. "I’ll treat ‘em decently. There’ll be money to be made here, and I can make it without stepping on too many toes."

"A zoo, you mean," Rynason interrupted.

Manning raised an amused eyebrow at him. "A reservation, I said. You know what reservations are like, Lee."

Rynason glared at the heavier man, then subsided. There was no point in getting into a fight over if’s and maybe’s; in the outworlds you learned quickly to confine your clashes to tangibles. "Why did you want to see me?"
he said.

"I want your preliminary report completed," Manning said. "I've got to have my complete report collated and transmitted within the week, if it's to have any effect on the Council. Most of the boys have got them in already; Breune and Larsborg have promised theirs within four days. But you're still holding me up."

Rynason took a long swallow of his drink and put it down empty. The noise and smell of the bar seemed to grow around him, washing over him. It might have been the effects of the tarpaq in the drink, but he felt his stomach tighten and turn slightly when he thought of how Earth's culture presented itself, warped itself, here on the frontier Edge. Was this land of mercenary, slipshod rush really what had carried Earthmen to the stars?

"I don't know if I'll have much to report for at least a week," he said shortly.

"Then give me a report on what you've got!" Manning snapped. "If nothing else, turn in your transcripts and I'll do the report myself; I can handle it. What the hell do you mean, you won't have much to report?"

"Larsborg said the same thing," Mara interjected.

"Larsborg said he'd have his report ready in a couple of days anyway!"

"I'll give you what I've got as soon as I can," Rynason said. "But things are just beginning to break for me—did you see my note this afternoon?"

"Yes, of course. The part about this Tedron or whatever his name was?"

"Tebron Marl. He's the link between their barbaric and civilized periods. I've only begun to get into it."

Manning was waving for more drinks; he caught a waiter's eye and then turned back to Rynason. "What's this nonsense about some damned block you ran into? Have you got a crazy horse on your hands?"

"There's something strange there," Rynason said. "He tells me this Tebron was actually supposed to have communicated with their god, or whatever he was. It sounds crazy, all right. But there's more to it than that, I'm sure of it. I wanted time to go into it further before I made my report."

"I think you've got a nut alien there, boy. Don't let him foul you up; you're one of my best men."

Rynason almost sneered, but he managed to bring it out as a grin. The role of protective father did not sit well on Manning's shoulders. "We're dealing here with a remarkably sane race," he pointed out. "The very fact that they have total recall argues against any insanity in them. There've been experiments on the inner worlds for over a century now, trying to bring out total recall in us, and not much luck so far. We're a sick, hung-up race."

Manning slapped his hand down on the table. "What the hell are you trying to do, Lee? Are you trying to measure these aliens by our standards? I thought you had better sense. Total recall doesn't necessarily mean a damn thing in them—but when they start telling you straightforward and cold that they've talked with some god, and then they throw what sounds like an anxiety fit right in front of you…. Well, what does it sound like to you?"

Rynason accepted one of the drinks that the waiter banged down on the table and took a sip. He felt lightheaded. "It would have been an anxiety fit if Horng had been human," he said. "But you're right, I do know better than to judge him by our standards. No, it was something else."

"What, then?"

He shook his head. "I don't know. That's the point—I can't give you a decent report until I find out."

"Then, dammit, give me an indecent report! Fill it out with some very learned speculations, you know the type…." Manning stopped, and grinned. "Speaking of indecent reports, what have we turned up on their sex lives?"

"Marc Stoworth covered that in his report yesterday," Mara said. "They're unisexual, and their sex life is singularly boring, if you'll pardon the expression. At least, Stoworth says so. If it weren't I'm sure he'd tell us all about it."

Rynason chuckled. "Yes, I imagine you're right; Marc is a good boy. Well look, Lee, I've told you the position I'm in. Now I'm counting on you to get me out of this spot. I've got to transmit my report to Council within a week. I don't want to pressure you, but you know I'm in a position to do it if I have to. Dammit, give me a report."

"I'll turn something in in a few days," Rynason said vaguely. His brain was definitely fuzzy now from the tarpaq.

Manning stood up. "All right, don't forget it. Trick it out with some high-sounding guesses if you have to, like I said. Right now I've got to see a man about a woman." He paused, glancing at Mara. "You're busy?"

"I'm busy, yes." Her face was studiedly expressionless.

He shrugged briefly and went out, pushing and weaving his way through the hubbub that filled the bar. It was dark outside; Rynason caught a glimpse of the dark street as Manning went through the door. Night fell quickly on Hirlaj, with the suddenness of age.

Rynason turned back to the table, and Mara. He looked at her curiously.

"What were you doing with him, anyway? You usually keep to yourself."

The girl smiled wryly. She had deep black hair which fell to her shoulders in soft waves. Most of the women here grew their hair down to their waists, in exaggerated imitation of inner-world styles, but Mara had more taste
than that. Her eyes were a clear brown, and they met his directly. "He was in a sharp mood, so I came along as peacemaker. You don’t seem to have needed me."

"You helped, at that; thanks. Was that true about the governorship?"

"Of course. Manning seldom brags, you should know that. He’s a very capable man, in some ways."

Rynason frowned. "He could be a lot more useful on this survey if he’d use his talents on tightening up the survey itself. He’s forcing a premature report, and it isn’t going to be worth much."

"Is that what’s really bothering you?" she asked.

He tried to focus on her through the haze of the noisy bar. "Of course it is. That, and his whole attitude toward these people."

"The Hirlaji? Are they people to you?"

He shrugged. "What are people? Humans? Or reasoning beings you can talk to, communicate with?"

"I should think people would be reasoning beings you could relate to," she said softly. "Not just intellectually, but emotionally too. You have to be able to understand them to communicate that way—that’s what makes people."

Rynason was silent, trying to integrate that into the fog in his head. The raucous noise of the bar had faded into an underwater murmur around him, lost somewhere where he could not see.

Finally, he said, "That’s the trouble with them, the Hirlaji. I can’t really understand them. It’s like there’s really no contact, not even through the interpreter." He stared into his drink. "I wish to hell we had some straight telepathers here; they might work with the Hirlaji, since they’re telepathic anyway. I’d like to make a direct link myself."

After a moment he felt Mara’s hand on his arm, and realized that he had almost fallen asleep on the table.

"You’d better go on back to your quarters," she said.

He sat up, shaking his head to clear it. "No, but really—what do you think of that idea? What if I had a telepather, and I could link minds with Horng? Straight linkage, no interpreter in the middle. I could get right at that race memory myself!"

"I think you need some sleep," she said. She seemed worried. "You’re getting too wrapped up in this thing. And forget about the telepathers."

Rynason looked at her and grinned. "Why?" he said quietly. "There’s no harm in wishing."

"Because," she said, "we’ve got three telepathers coming in the day after tomorrow."

Rynason continued to smile at her for several seconds, until her words penetrated. Then he abruptly sat up and steadied himself with one hand against the edge of the table.

"Can you get one for me?"

She gave a reluctant shrug. "If you insist, and if Manning okays it. But is it a good idea? Direct contact with a mind so alien?"

As a matter of fact, now that he was faced with the actual possibility of it, he wasn’t so sure. But he said, "We’ll only know once we’ve tried it."

Mara dropped her eyes and swirled her drink, watching the tiny red spots form inside the glass and rise to the surface. There was a brief silence between them.

"Repent, Lee Rynason!" The words burst upon his ears over the waves of sound that filled the room. He turned, half-rising, to find Rene Malhomme hovering over him, his wide grin showing a tooth missing in the bottom row.

Rynason settled back into his chair. "Don’t shout. I’m going to have a headache soon enough."

Malhomme turned the chair which Manning had vacated and sat in it heavily. He set his hand-lettered placard against the edge of the table and leaned forward, waving a thick finger.

"You consort with men who would enslave the pure in heart!" he rumbled, but Rynason didn’t miss the laughter in his eye.

"Manning?" he nodded. "He’d enslave every pure heart on this planet, if he could find one. As a matter of fact, I think he’s already working on Mara here."

Malhomme turned to her and sat back, appraising her boldly. Mara met his gaze calmly, raising her eyebrows slightly as she waited for his verdict.

Malhomme shook his head. "If she’s pure, then it’s a sin," he said. "A thrice-damned sin, Lee. Have I ever expostulated to you upon the Janus-coin that is good and evil?"

"Often," Rynason said.

Malhomme shrugged and turned again to the girl. "Nevertheless," he said, "I greet you with pleasure."

"Mara, this is Rene Malhomme," Rynason said warily. "He imagines that we’re friends, and I’m afraid he’s right."

Malhomme dipped his shaggy head. "The name is from the Old French of Earth—badman. I have a long and
dishonorable family history, but the earliest of my ancestors whom I’ve been able to trace had the same name. Apparently there were too many Smiths, Carpenters, Bakers and Priests on that world—the time was ripe for a Malhomme. My first name would have been pronounced Reh-nay before the language reform dropped all accent marks from Earth tongues."

"Considering your background," Mara smiled, "you’re in good company out here."

"Good company!" Malhomme cried. "I’m not looking for good company! My work, my mission calls me to where men’s hearts are the blackest, where repentance and redemption are needed—and so I come to the Edge."

"You’re religious?" she asked.

"Who is religious in these days?" Malhomme asked, shrugging. "Religion is of the past; it is dead. It is nearly forgotten, and one hears God’s name spoken now in anger. God damn you, cry the masses! That is our modern religion!"

"Rene wanders around shouting about sin," Rynason explained, "so that he can take up collections to buy himself more to drink."

Malhomme chuckled. "Ah, Lee, you’re shortsighted. I’m an unbeliever, and a black rogue, but at least I have a mission. Our scientific advance has destroyed religion; we’ve penetrated to the heavens, and found no God. But science has not disproved Him, either, and people forget that. I speak with the voice of the forgotten; I remind people of God, to even the scales."

He stopped talking long enough to grab the arm of a passing waiter and order a drink. Then he turned back to them. "Nothing says I have to believe in religion. If that were necessary, no one would preach it."

"Have you been preaching to the Hirlaji?" Rynason asked.

"An admirable idea!" Malhomme said. "Do they have souls?"

"They have a god, at least. Or used to, anyway. Fellow named Kor, who was god, essence, knowledge, and several other things all rolled into one."

"Return to Kor!" Malhomme said. "Perhaps it will be my next mission."

"What’s your mission now?" Mara asked, smiling in spite of herself. "Besides your apparently lifelong study and participation in sin, I mean."

Malhomme sighed and sat back as his drink arrived. He dug into the pouch strung from his waist and flipped a coin to the waiter. "Believe it or not, I have one," he said, and his voice was now low and serious. "I’m not just a lounger, a drifter."

"What are you?"

"I am a spy," he said, and raised his glass to drain half of it with one swallow.

Mara smiled again, but he didn’t return it. He sat forward and turned to Rynason. "Manning has been busily wrapping up the appointment for the governorship here," he said. "You probably know that."

Rynason nodded. The headache he had been expecting was already starting.

"Did you also know that he’s been buying men here to stand with him in case someone else is appointed?" He glanced at Mara. "I go among the men every day, talking, and I hear a lot. Manning will end up in control here, one way or another, unless he’s stopped."

"Buying men is nothing new," Rynason said. "In any case, is there a better man on the planet?"

Malhomme shook his head. "I don’t know; sometimes I give up on the human race. Manning at least has a little culture in him—but he’s more vicious than he seems, nevertheless. If he gets control here…."

"It will be no worse than any of the other planets out here," Rynason concluded for him.

"Except for one thing, perhaps—the Hirlaji. I don’t have much against men killing each other … that’s their own business. But unless we get somebody better than Manning governing here, the Hirlaji will be wiped out. The men here are already talking … they’re afraid of them."

"Why? The Hirlaji are harmless."

"Because of their size, and because we don’t know anything about them. Because they’re intelligent—any uneducated man is afraid of intelligence, and when it’s an alien…." He shook his head. "Manning isn’t helping the situation."

"What do you mean by that?" Mara asked.

Malhomme’s frown deepened, creasing the dark lines of his forehead into furrows. "He’s using the Hirlaji as bogey-men. Says he’s the only man on the planet who knows how to deal with them safely. Oh, you should hear him when he moves among his people…. I envy his ability to control them with words. A little backslapping, a joke or two—most of them I was telling last year—and he talks to them man to man, very friendly." He shook his head again. "Manning is so friendly with this scum that his attitude is nothing short of patronizing."

Rynason smiled wearily at Malhomme; for all the man’s wilderness, he couldn’t help liking him. It had been like this every time he had run into him, on a dozen of the Edge-worlds. Malhomme, dirty and cynical, moved among the
dregs of the stars preaching religion and fighting the corporations, the opportunists, the phony rebels who wanted nothing for anyone but themselves. He had been known to break heads together with his huge fists, and he had no qualms about stealing or even killing when his anger was aroused. Yet there was a peculiar honesty about him.

"You always have to have a cause, don't you, Rene?"

The greying giant shrugged. "It makes life interesting, and it makes me feel good sometimes. But I don't overestimate myself: I'm scum, like the rest of them. The only difference is that I know it; I'm just one man, with no more rights than anyone else, except those I can take." He held up his large knuckled hands and turned them in front of his face. "I've got broken bones in both of them. I wonder if the Buddha or the Christ ever hit a man. The books on religion that are left in the repositories don't say."

"Would it make any difference if they hadn't?" Rynason asked.

"Hell, no! I'm just curious." Malhomme stood up, hefting his repentance sign in the crook of one big arm. His face again took on its arched look as he said, "My duty calls me elsewhere. But I leave you with a message from the scriptures, and it has been my guiding light. 'Resist not evil,' my children. Resist not evil."

"Who said that?" Rynason asked.

Malhomme shook his head. "Damned if I know," he muttered, and went away.

After a moment Rynason turned back to the girl; she was still watching Malhomme thread his way through the men on his way to the door.

"So now you've met my spiritual father," he said.

Her deep brown eyes flickered back to his. "I wish I could use a telepather on him. I'd like to know how he really thinks."

"He thinks exactly as he speaks," Rynason said. "At least, at the moment he says something, he believes in it."

She smiled. "I suppose that's the only possible explanation for him." She was silent for a moment, her face thoughtful. Then she said, "He didn't finish his drink."

"You're all hooked up," the girl said. "Nod or something when you're ready." She was bent over the telepather, double checking the connectives and the blinking meters. Rynason and Horng sat opposite each other, the huge dark mound of the alien looming silently over the Earthman.

He never seemed upset, Rynason thought, looking up at him. Except for that one time when they'd run into the stone wall of the block on Tebron, Horng had displayed a completely even temperament—unruffled, calm, almost disinterested. But of course if the aliens had been completely uninterested in the Earthmen's probings at their history they would never have cooperated so readily; the Hirlaji were not animals to be ordered about by the Earthmen. Probably the codification of their history would prove useful to the aliens too; they had never arranged the race memory into a very coherent order themselves.

Not that that was surprising, Rynason decided. The Hirlaji had no written language—their telepathic abilities had made that unnecessary—and organization of material into neatly outlined form was a characteristic as much of the Earth languages as of Terran mentality. Such organization was not a Hirlaji trait apparently, at least not now in the twilight of their civilization. The huge aliens lived dimly through these centuries, dreaming in their own way of the past … and their way was not the Earthmen's.

So if they cooperated with the survey team on codifying and recording their history, who was the servant? Well, with the direct linkage of minds the work should go faster. Rynason looked up at Mara and nodded, and she flicked the connection on the telepather.

Suddenly, like being overwhelmed by a breaking wave of seawater, Rynason felt Horng's mind envelope him. A torrent of thoughts, memories, pictures and concepts poured over him in a jumble; the sensory sensations of the alien came to him sharply, and memories that were strange, ideas that were incomprehensible, all in a sudden rush upon his mind. He fought down the fear that had leapt in him, gritted his teeth and waited for the wave to subside.

It did not subside; it settled. As the two minds, Earthman and Hirlaji, met in direct linkage they became almost one. Gradually Rynason could begin to see some pattern to the impressions of the alien. The picture of himself came first: he was small and angular, sitting several feet below Horng's—or his own—eyes; but more than that, he was not merely light, but pallid, not merely small, but fragile. The alien's view of reality, even through his direct sensations, was not merely visual or tactile but interpreted automatically in his own terms.

The odor of the hall in which they sat was different, the very temperature warmer. Rynason could see himself reeling on the stone bench where he sat, and Mara, strangely distorted, put out a hand to steady him. At the same time he was seeing through his own eyes, feeling her hand on his shoulder. But the alien sensations were stronger; their very strangeness commanded the attention of his mind.

He righted himself, physically and mentally, and began to probe tentatively in this new part of his mind. He could feel Horng too reaching slowly for contact; his presence was comfortable, mild, confused but unworried. As his thoughts blended with Horng's the present faded perceptibly; this confusion was merely a moment in centuries,
and soon too it would pass. Rynason could feel himself relaxing.

Now he could reach out and touch the strange areas of this mind: the concepts and attitudes of an alien race and culture and experience. Everything became dim and dream-like: the Earthmen possibly didn’t exist, the dry wastes of Hirlaj had always been here or perhaps once they had been green but through four generations the Large Hall had stood thus and the animals changed by the day too fast to distinguish them even under Kor if he should be reached … why? there was no reason. There was no purpose, no goal, no necessity, no wishing, questing, hoping … no curiosity. All would pass. All was passing even now; perhaps already it was gone.

Rynason shifted where he sat, reaching for the feeling of the stone bench beneath him for equilibrium, pulling out of Horng’s thoughts and going back in almost immediately.

A chaos of mind enveloped him, but he was beginning to familiarize himself with it now. He probed slowly for the memories, down through Horng’s own personal memories of three centuries, dry feet on the dust and low winds, down to the racial pool. And he found it.

Even knowing the outlines of the race’s history did not help Rynason to place and correlate those impressions which came to him one on top of another, overlapping, merging, blending. He saw buildings which towered over him, masses of his people moving quietly around him, and thoughts came to him from their minds. He was Norhib, artisan, working slowly day by … he was Rashanah, approaching the Gate of the Wall and looking … he was Lohreen discussing the site where … he was digging the ground, pushing the heavy cart, lying on the pelt of animals, demolishing the building which would soon fall, instructing a child in balance.

A dirt-caked street stretched before him by night, the stones individually cut and smooth with the passage of heavy feet. "Tomorrow we will set out for the Region of Chalk while there is still time." A mind-voice from a Hirlaji hundreds, perhaps thousands of years old, dead but alive in the race-memory. Rynason could feel the whole personality there, in the memories, but he passed on.

"Murba has said that the priests will take him."
"There is no need for planting this year … the soil is dry. There is no purpose."
"The child’s mind is ready for war."

He felt Horng himself watching him, beside him or behind him … nearby, anyway. The alien heard and saw with him, and stayed with him like a protector. Rynason felt his presence warmly: the calm of the alien continued to relax him. Old leather mother-hen, he thought, and Horng beside him seemed almost amused.

Suddenly he was Tebron.

Tebron Marl, prince in the Region of Mines, young and strong and ambitious. Rynason caught and held those impressions; he felt the muscles ripple strangely through his body as Tebron stretched, felt the cold wind of the flat cut through his loose garment. It was night, and he stood on the parapet of a heavy stone structure looking down across the immense stretch of the Flat, spotted here and there by lights. He controlled all this land, and would control more….

He was Tebron again, marching across the Flat at the head of an army. Metal weapons hung at the sides of his men, crudely fashioned bludgeons and jagged-edged swords, all quickly forged in the workshops of the Region of Mines. The babble of mind voices swelled around him, fear and anger and boredom, dull resentment, and other emotions Rynason could not identify. They were marching on the City of the Temple….

He slipped sideways in Tebron’s mind, and suddenly he was in the middle of the battle. There was dust all around, kicked up by the scuffling feet of the huge warriors, and his breath came in gasps. Mind-voices shouted and screamed but he paid no attention; he swung his bludgeon over his head with a ferocity that made it whistle with a low sound in the wind. One of the defenders broke through the line around him, and he brought the bludgeon smashing down at him before he could thrust with his sword; the warrior fell to one side at the last moment and took the blow along one arm. He could feel the pain in his own mind, but he ignored it. Before the warrior could bring up his sword again Tebron crushed his head with the bludgeon, and the scream of pain in his own head disappeared. He heard the grunting and gasps of his own warriors and the clash of bodies and weapons around him….

The Hirlaji could not really be moving so quickly, Rynason thought; it must be that to Tebron it seemed so. They were quiet, slow-moving creatures. Or had they degenerated physically through the centuries? Still smelling the sweat of battle, he found Tebron’s mind again.

There was still fighting in the city, but it was far away now; he heard it with the back of his mind as he mounted the steps of the Temple. Those were mop-up operations, clearing the streets of the last of the priest-king forces; he was not needed there. He had, to all intents, controlled the city since the night before, and had slept in the palace itself. Now it was time for the Temple.

He mounted the heavy, steep steps slowly, three guards at his back and three in front of him. The priests would be gone from the Temple, but there might be one or two last-ditch defenders remaining, and they would be armed with the Weapons of Kor … hand-weapons which shot dark beams that could disintegrate anything in their path.
They would be dangerous. Well, there would be no temple-guards in the inner court; his own men could remain outside to take care of them while he went in.

He stopped halfway up the steps and lifted his head to gaze up at the Temple walls rising above him. They were solid stone, built in the fashion of the Old Ones … smooth-faced except for the carvings above the entrance itself. They too were in the traditional style, copied exactly from the older buildings which had been built thousands of years ago, before the Hirlaji had even developed telepathy. The symbols of Kor … so now at last he saw them.

Tomorrow he would effect a mass-linkage of minds and broadcast his orders for reconstruction. That would mean staying up all night preparing the communication, for it was impossible to maintain complete planet-wide linkage for too long and Tebron had many plans. Perhaps it would be possible to find a way to extend the duration of mass-linkages if the science quest could be pushed forward fast enough.

But that was tomorrow’s problem—today, right now, it was right that he enter the Temple. It was not only symbolic of his assumption of power, but necessary religiously: every new ruler leader within the memory of the race had received sanction from Kor first.

A momentary echo-whisper of another mind touched his, and he whirled to his right to see one of the temple-guards in the shadows; he had been unable to successfully shield his thoughts. Tebron dropped to the ground and sent a quick, cool order to his own guards: "Kill him." The heavy, dark warriors stepped forward as the guard tried to shrink back further into the shadows. He was trapped.

But not unarmed. As he dropped to the steps and rolled quickly to one side Tebron heard the low vibration of a disintegrator beam pass over his shoulder and the crack of the wall behind him as it struck. And then the guards were on the warrior in the shadows.

They had brought down several of the temple-guards the night before, and commandeered their weapons. In a matter of moments this one fell too, his head and most of his trunk gone. One of the warriors shoved the half-carcass down the stairs, and bent forward at the knees to pick up his fallen weapon.

So now they had all fourteen of them; if any more of the temple-guards remained they could be dealt with easily. Tebron rose from the steps and wished momentarily that those weapons could be duplicated; if his whole army could be equipped with them…. But after today that would probably be unnecessary; the entire planet was his now.

He walked up the last few steps and stepped into the shadows of the Temple of Kor….

The walls melted around him and Rynason felt his mind wrenched painfully. There was a screaming all through him, thin and high, blotting out the contact he had held with Tebron's mind. It was Horng’s scream, beside him, overpowering. Terror washed over him; he tried to fight it but he couldn't. The shadows of the walls twisted and faded, Tebron’s thoughts disappeared, and all that remained was the screaming and the fear, like a mouth open wide against his ear and hot breath shouting into him. He felt his stomach turn and nausea and vertigo threw him panting out of Tebron's mind.

Yet Horng was still beside him in the darkness, and as the echoes faded he felt him there … alien, but calm. There had been fear in this huge alien mind, but it had disappeared almost immediately with the breaking of the connection with Tebron. All that remained in Horng’s mind now was a dull quietness.

Rynason felt a rueful grin on his face, and he said, perhaps aloud and perhaps not, "You haven’t forgotten what happened here, old leather. The memories are there, all right.”

From Horng’s mind came a slow rebuilding of the fear that he had just experienced, but it subsided. And as it did Rynason probed again into his mind, searching quickly for that contact he had just lost. He could almost feel Tebron’s mind, began to see the darkness forming the wall-shadows, when again there was a blast of the terror and he felt his mind reeling back from those memories. The screaming filled his mind and body and this time he felt Horng himself blocking him, pushing him back.

But there was no need for that; the fear was not Horng’s alone. Rynason felt it too, and he retreated before its onslaught with an overpowering need to preserve his own sanity.

When the darkness subsided Rynason became aware of himself still sitting on the stone bench, sweat drenching his body. Horng sat before him in the same position he had been in when they had started; it was as if nothing had happened at all. Rynason wearily raised one hand and motioned to Mara to break the linkage.

She switched off the telepather and gingerly removed the wires from his head, frowning worriedly at him. But she waited for him to speak.

He grinned at her after a moment and said, "It was a bit rough in there. We couldn’t break through.”

She was removing the wires from Horng, who sat unmoving, staring dully over Rynason’s shoulder at the wall behind him. "You should have seen yourself when you were under,” she said. "I wanted to break the connection before, but I wasn’t sure….”

Rynason sat forward and flexed the muscles of his shoulders and back. They ached as though they had been
tense for an hour, and his stomach was still knotted tight.

"There’s a real block there," he said. "It’s like a thousand screaming birds flapping in your face. When you get
that far into his mind, you feel it too." He sat staring down at his feet, exhausted mentally and physically.

She sat on the bench and looked closely at him. "Anything else?"

"Yes—Horng. At the end, the second time I went in, I could feel him, not only fighting me, but … hating me."
He looked up at her. "Can you imagine actually feeling him, right next to you in your mind like you were one
person, hating you?"

Across from them, the huge figure of the alien slowly stood up and looked at them for several long seconds,
than turned and left the building.

FOUR

Manning’s quarters were larger than most of the prefab structures in the new Earth town; the building was out
near the end of one of the streets, a single-storied plastic-and-metal box on a quick-concrete slab base. Well, it was
as well constructed as any of the buildings in the Edge planetfalls, Rynason reflected as he knocked on the door.
And there was room for all of the survey team workers.

Manning himself let him in, grabbing his hand in a firm grip that nevertheless lacked the man’s usual heavy
joviality. "Come on in; the others are already here," Manning said, and walked ahead of him into the larger of the
two rooms inside. His step was brisk as always, but there was a touch of real hurry in it which Rynason noticed
immediately. Manning was worried about something.

"All right; we’re all set," Manning said, leaning against a wall at the front of the room. Rynason found a seat on
the arm of a chair next to Mara and Marc Stoworth, a slightly heavy, blond-haired man in his thirties who wore his
hair cut short on the sides but long in back. He looked like every one of the young corporation executives Rynason
had seen in the outworlds, and probably would have gone into that kind of position if he’d had the connections. He
certainly seemed out of place even among the varied assortment of types who worked the archaeological and
geological surveys … but these surveys were conducted by the big corporations who were interested in developing
the outworlds; probably Stoworth hoped eventually to move up into the lower management offices when the
corporations moved in.

"Gentlemen, there’s something very wrong about these dumb horses we’ve been dealing with," Manning said.
"I’m going to throw out a few facts at you and see if you don’t come to the same conclusions that Larsborg and I
did."

Rynason leaned over to Mara and murmured, "What’s his problem today?"

But she was frowning. "He’s got a real one. Listen."

Manning had picked up a sheaf of typescript from the table next to him and was flipping through it, his lips
pursed grimly. "This is the report I got yesterday from Larsborg here—architecture and various other artifacts. It’s
very interesting. Herb, throw that first photo onto the screen."

The lights went off and the screen in the wall beside Manning lit up with a reproduction of one of the Hirlaji
structures out on the Flat. It stood in the shadow of an overhanging rock-cliff, protected from the planet’s heavy
winds on three sides. Larsborg had apparently set up lights for a clearer picture; the whole building stood out sharply
against the shadows of the background.

"This look familiar to any of you?" Manning said quietly.

For a moment Rynason continued to stare comprehending at the picture. He had seen a lot of the Hirlaji
buildings since they’d landed; this one was better preserved but not essentially different in design. Larsborg had
cleared away most of the dirt and sand which had been packed up against its sides, exposing the full height of the
structure, and he’d apparently sand-blasted the carved designs over the entrance, but….

Then he realized what he was seeing. The angle of the photo was a bit different than that from which he’d seen
the other structure back on Tentar XI, but the similarity was unmistakable. This was a reproduction in stone of that
same building, the one they’d reconstructed two years before.

He heard a wave of voices growing around the room, and Manning’s voice cut-through it with: "That’s right,
gentlemen: it’s an Outsiders building. It’s not in that crazy, damned metal or alloy or whatever it was that they used,
but it’s the same design. Take a good long look at it before we go on to the next photo."

Rynason looked … closely. Yes, it was the same design a bit cruder, and the carvings weren’t the same, but the
lines of the doorway and the cornice….

The next picture flashed onto the screen. It was a closeup of the designs over the entrance, shot in sharp relief
so that they stood out starkly. The room was so quiet that Rynason could hear the hum behind the screen in the wall.

"That’s Outsiders stuff too," said Breune. "It’s not quite the same, though … distorted."

"It’s carved in stone, not stamped in metal," Manning said. "It’s the same thing, all right. Anybody disagree?"

No one did.
"All right, then; let’s have the lights back up again."
The lights came on and once more there was a murmur of talking around the room. Rynason shifted his position on the seat and tried to catch the thought that had slipped through his mind just before the screen had faded. There was another similarity…. Well, he’d seen a lot of the Outsider buildings in the past few years; it wasn’t necessary to trace all the evidences right now.
"What I want to know is, why didn’t any of the rest of you see this?" said Manning angrily. "Have you all got plastic for brains? Over a dozen men spend weeks researching these damn horsefaces, and only one of you has the sense to see the evidence of his own eyes!"
"Maybe we should turn in our spades," said Stoworth.
Manning glared at him. "Maybe you should, if you think this isn’t serious. Let’s get this clear: these old horsefaces that so many of you think are just as quaint as can be have been building in exactly the same style as the Outsiders. Quaint, are they? Harmless too, I suppose!"
He stood with his hands on his hips, dropped his head and took a long, deep breath. When he looked up again his forehead was furrowed into an intense frown. "Gentlemen … as I call you from force of habit … we’ve been finding dead cities of the Outsiders for centuries. They were all over God knows how many galaxies before your ancestors or mine had stopped playing with their tails; as far as we can tell they had a civilization as tightly-knit as our own, and probably stronger. And sometime about forty thousand years ago they started pulling out. They left absolutely nothing behind but empty buildings and a few crumbling bits of machinery. And we’ve been following those remains ever since we got out of our own star-system.
"Well, we just may have found them at last. Right here, on Hirlaj. Now what do you think of that?"
No one said anything for a minute. Rynason looked down at Mara, caught her smile, and stood up.
"I don’t think the Hirlaji are the Outsiders," he said calmly.
Manning shot a sharp glance at him. "You saw the photos."
"Yes, I saw them. That’s Outsiders work, all right, or something a lot like it. But it doesn’t necessarily prove that these … how many of them are there? Twenty-five? I don’t think these creatures are the Outsiders. We’ve traced their history back practically to the point of complete barbarism. Their culture was never once high enough to get them off this planet, let alone to let them spread all over among the stars."
Manning waited for him to finish, then he turned back to the rest of the men in the room and spread his hands.
"Now that, gentlemen, just shows how much we’ve found out so far." He looked over at Rynason again. "Has it occurred to you, Lee, that if these horses are the Outsiders, that maybe they know a little more than we do? I suppose you’re going to say you had a telepathic hookup with one of them and you didn’t see a thing to make you suspicious … but just remember that they’ve been using telepathy for several thousand years and that you hardly know what you’re doing when you try it.
"Look, I don’t trust them—if they’re the Outsiders they’ve got maybe a hundred thousand years head-start on us scientifically. There may be only a couple dozen of them, but we don’t know how strong they are."
"That’s if they’re really the Outsiders," said Rynason.
Manning nodded his head impatiently. "Yes, that’s what I’m saying. If they’re the Outsiders, which looks like a sensible conclusion. Or do you have a better one?"
"Well, I don’t know if it’s better," said Rynason. "It may not even be as attractive, for that matter. But have you considered that maybe when the Outsiders pulled out of our area they simply moved on elsewhere? We’re so used to seeing dead cities that we think automatically that the Outsiders must be dead too, which I suppose is what’s bothering you about finding the Hirlaji here alive. But it might be worse. That whole empire could simply have moved on to this area; we could be on the edge of it right now, ready to run head-on into a hundred star systems just crowded with the Outsiders."
Manning stared at him, and the expression on his face was not quite anger. Something like it, but not anger.
"The ruins we’ve found here were built by the Hirlaji," Rynason said. "I saw them building when I was linked with Horng, and these are the same structures. But the design was copied from older buildings, and I don’t know how far back I’d have to search the memories before I found where they originally got that kind of approach to design. Maybe back before they developed telepathy. But this race simply isn’t as old as the Outsiders; they came out of barbarism thousands of years after the Outsiders had left those dead cities we’ve been finding. The chances are that if the Hirlaji were influenced by the Outsiders it was sometime around thirty thousand years ago … which means the Outsiders came this way when they left those cities. That would mean that we’re following them … and we might catch up at any time."
He stopped for a moment, then said, "We’re moving faster than they were, and we have no idea where they may have settled again. One more starfall further beyond the Edge, and we may run into one of their present outposts. But this isn’t it. Not yet."
Manning was still staring at Rynason, but it was a curious stare. "You're pretty sure that what you've been getting out of that horseface's head is real?" he asked levelly. "You trust them?"

Rynason nodded. "Horng was really afraid; that was real. And the rest of it was real, too—I could see the whole racial memory there, and nobody could have been making that up. If you'd experienced that..."

"Well, I didn't," Manning said shortly. "And I don't think I trust them." He paused, and after a moment frowned. "But this direct linkage business does seem to be the best way we have of checking on them. I want you to get busy, Lee, and go after that horse's thoughts for us. Don't let him drive you out again; if he's hiding something, get in there and see what it is. Above all, don't trust him.

"If these things are the Outsiders, they could be bluffing us."

Manning stopped talking, and thought a minute. He looked up under raised eyebrows at Rynason. "And be careful, Lee. I'm counting on you."

Rynason ignored his paternal gaze, and turned instead to Mara. "We'll try it again tomorrow," he said. "Get in a requisition for a telepather this afternoon; make sure we'll have one ready to go first thing in the morning. I'll check back with you about an hour after we leave here today."

She looked up at him, surprised. "Check back? Why?"

"I put in a requisition myself, yesterday. Wine from Cluster II, vintage '86. I was hoping for some company."

She smiled. "All right."

Manning was ending the session. "...Carl, be sure to get those studies of the Outsiders artifacts together for me by tonight. And I'm going to hand back your reports to each of the rest of you; go through them and watch for those inconsistencies you skipped over the first time. We may be able to turn up something else that doesn't check out. Go over them carefully—all the reports were sloppy jobs. You're all trying to work too fast."

Rynason rose with the rest of them, grinning as he remembered how Manning had rushed those reports. Well, that was one of the privileges of authority: delegating fault. He started for the door.

"Lee! Hold it a minute; I want to talk to you, alone."

Rynason sat, and when all the others had gone Manning came back and sat down opposite him. He slowly took out a cigaret and lit it.

"My last pack till the next spacer makes touchdown," he said. "Sorry I can't offer you one, but I'm a fiend for the things. I know they're supposed to be non-habit-forming these days, but I'm a man of many vices."

Rynason shrugged, waiting for him to come to the point.

"I guess it makes me a bit more open-minded about what the members of my staff do," Manning went on. "You know—why should I crack down on drinking or smoking, for instance, when I do it myself?"

"I'm glad you see it that way," Rynason said drily. "Why did you want me to stay?"

Manning exhaled a long plume of smoke slowly, watching it through narrowed eyes. "Well, even though I'm pretty easy going about things, I do try to keep an eye on you. When you come right down to it, I'm responsible for every man who's with me out here."

Rynason could see what was coming now. He sat further back into the chair and said, "Why?"

Manning frowned with concern. "I've been noticing you with Mara lately. You seem pretty interested in her."

"Is she one of those vices you were telling me about, Manning?" said Rynason quietly. "You want to warn me to stay away from her?"

Manning shook his head, a quick gesture dismissing the idea. "No, Lee, not at all. She's not that kind of a woman. And that's my point. I can see how you look at her, and you're on the wrong track. When you're out here on the Edge, you don't want a wife."

"What I need is some good healthy vice, is that what you mean?"

Manning sat forward. "That puts it pretty clearly. Yeah, that's about it. Lee, you're building up some strong tensions on this job, and don't think I'm not aware of it. Telepathing with that horseface is getting rough, judging from what you've told me. I think you should go get good and drunk and kick up hell tonight. And take one of the town women; they're always available. Do you good, I mean it."

Rynason stood up. "Maybe tomorrow night," he said. "Tonight I'm busy. With Mara." He turned and walked toward the door.

"I'd suggest you get busy with someone else," Manning said quietly behind him. "I'm really telling you this for
your own good, believe it or not."

Rynason turned at the door and regarded the man coldly. "She’s not interested in you, Manning," he said. He went out and shut the door calmly behind him.

Manning could be irritating with his conceited posing, but his veiled threats didn’t bother Rynason. In any case, he had something else on his mind just now. He had finally remembered what it had been about the carvings over the Hirlaji building in the photo that had touched a memory within him: there was a strong similarity to the carvings that he had seen, through Tebron’s eyes, outside the Temple of Kor. The symbols of Kor, Tebron had called them … copied from the works of the Old Ones.

The Outsiders?

FIVE

They had some trouble getting cooperation from Horng on any further mind-probing. The Hirlaji lived among some of the ruins out on the Flat, where the winds threw dust and sand against the weathered stone walls, leaving them worn smooth and rounded. The aliens kept these buildings in some state of repair, and there was a communal garden of the planet’s dark, fungoid plant life. As Rynason and Mara strode between the massive buildings they passed several of the huge creatures; one or two of them turned and regarded the couple with dull eyes, and went on slowly through the grey shadows.

They found Horng sitting motionlessly at the edge of the cluster of buildings, gazing out over the Flat toward the low hills which stood black against the deep blue of the horizon sky. Rynason lowered the telepather from his shoulder and approached him.

The alien made no motion of protest when Rynason hooked up the interpreter, but when the Earthman raised the mike to speak, Horng’s dry voice spoke in the silence of the thin air and the machine’s stylus traced out, THERE IS NO PURPOSE.

Rynason paused a moment, then said, "We’re almost finished with our reports. We should finish today."

THERE IS NO PURPOSE MEANING QUEST.

"No purpose to the report?" Rynason said after a moment. "It’s important to us, and we’re almost finished. There would be even less purpose in stopping now, when so much has been done."

Horng’s large, leathery head turned toward him and Rynason felt the ancient creature’s heavy gaze on him like a shadow.

WE ARE ACCUSTOMED TO THAT.

"We don’t think alike," Rynason said to him. "To me there is a purpose. Will you help me once more?"

There was no answer from the alien, only a slow nodding of his head to one side, which Rynason took for assent. He motioned Mara to set up the telepather.

After their last experience Rynason could understand the creature’s reluctance to continue. Perhaps even his statement that there was no purpose to the Earthmen’s researches made sense—for could the codification of the history of a dying race mean much to its last members? Probably they didn’t care; they walked slowly through the ruins of their world and felt all around them fading, and the jumbled past in their minds must be only one more thing that was to disappear.

And Rynason had not forgotten the terrified waves of hatred which had blasted at him in Horng’s mind—nor had Horng, he was sure.

Mara connected the leads of the telepather while the alien sat motionlessly, his dark eyes only occasionally watching either of them. When she was finished Rynason nodded for her to activate the linkage.

Then there was the rush of Horng’s mind upon his, the dim thought-streams growing closer, the greyed images becoming sharper and washing over him, and in a moment he felt his own thoughts merge with them, felt the totality of his own consciousness blend with that of Horng. They were together; they were almost one mind.

And in Horng he heard the whisper of distrust, of fear, and the echoes of that hatred which had struck at him once before. But they were in the background; all around him here on the surface was a pervading feeling of … uselessness, resignation, almost of unreality. The calm which he had noted before in Horng had been shaken and turned, and in its place was this fog of hopelessness.

Tentatively, Rynason reached for the racial memories in that grey mind, feeling Horng’s own consciousness heavy beside him. He found them, layers of thoughts of unknown aliens still alive here, the pictures and sounds of thousands of years past. He probed among them, looking again for the memories of Tebron … and found what he was searching for.

He was Tebron, marching across that vast Flat which he had seen before, the winds alive around him among the shuffling feet of his army. He felt the muscles of his massive legs tight with weariness, and tasted the dryness of the air as he drew in long gasps. He was still hours from the City, but they would rest before dawn….

Rynason turned among those memories, moving forward in them, and was aware of Horng watching him.
There was still the wariness in his mind, and a stir of anxiety, but it was blanketed by the tired hopelessness he had seen. He reached further in the memories, and....

The temple-guard fell in the shadows, and one of his own warriors stepped forward to retrieve his weapon. The remains of the guard’s body rolled down three, four, five of the steps of the Temple, and stopped. His eyes lingered on that body for only a moment, and then he turned and went up to the entrance.

There was a moaning of pain, or of fright, rising somewhere in his head; he was only partly aware of it. He walked into the shadows of the doorway and paused. But only for a moment: there was no movement inside, and he stepped forward, down one step into the interior.

Screams echoed through the halls and corridors of the Temple—high and piercing, growing in volume as they echoed, buffeting him almost into unconsciousness. He knew they were from Horng, but he fought them, watching his own steps across the dark inner room. He was Tebron Marl, king priest ruler of all Hirlaj, in the Temple of Kor, and he could feel the stone solid beneath his feet. Sweat broke out on his back—his own, or Tebron’s? But he was Tebron, and he fought the blast of fear in his mind as though it were a battle for his very identity. He was Tebron.

The screaming faded, and he stood in silence before the Altar of Kor.

So this is the source, he thought. For how many days had he fought toward this? It was useless to remember; the muscles of his body were remembrance enough, and the scar-tissue that hindered the movement of one shoulder. If he remembered those battles he would again hear the fading echoes of enemy minds dying within his, and he had had enough of that. This was the goal, and it was his; perhaps there need be no more such killing.

He opened his mouth and spoke the words which he had learned so many years before, during his apprenticeship in the Region of Mines. The rituals of the Temple were always conducted in the ancient spoken language: Kor demanded it, and only the priest-caste knew these words, for they were so old that their form had changed almost completely even by the time his people had developed telepathy and discarded speech; they were not communicated to the rest of the people.

"I am Tebron Marl, king priest leader of all Hirlaj. I await your orders guidance."

He knelt, according to ritual, and gazed up at the altar. The Eye of Kor blinked there, a small circle of light in the dark room. The altar was simple but massive; its heavy columns, built upon the traditional lines, supported the weight of the Eye. He watched its slow waxing and waning, and waited; within him, Rynason’s mind stirred.

And Kor spoke.

Remain motionless. Do not go forward.

He felt a child as a wave of sensitivity spread through all of his skin and his organs sped for a moment. Then it was true: in the Temple of Kor, the god leader really did speak.

"I await further words."

The Eye held his gaze almost hypnotically in the dimness. The voice sounded in the huge arched room. The sciences quests of your race lead you to extinction. The knowledge words offered to me by your priests make it clear that within a hundred years your race will leave its planet. You must not go forward, for that way lies the extermination of all your race.

His mind swam; this was not what he had expected. The god leader Kor had always aided his people in their sciences; in the knowledge word offerings they reported to the Eye the results of their studies, and often, if asked properly, the god leader would clarify uncertainties which they faced. But now he ordered an ending to research quests. This was unthinkable! Knowledge was godhood; godhood was knowledge, of the essence; the essence was knowing understanding. To him, to his people, it was a unity—and now that unity repudiated itself. Faintly in the darkness somewhere he again heard screaming.

"Are we to abandon all progress? Are the stars so dangerous?"

The concept wish of progress must die within your people. There must be no purpose in any field of knowledge. You must remain motionless, consolidate what you have, and live in peace. The Eye in the dimness seemed larger and brighter the longer he looked at it; all else in the echoing room was darkness. The stars are not dangerous, but there is a race which rises with you, and it rises more rapidly. Should you expand into the stars you will only meet that race sooner, and they will be stronger. They are more warlike than your people; already you are capable of peace, and that must be your aim. Remain on your world; consolidate; cultivate the fruits of your civilization as it is, but do not go forward. In that way, you will have five thousand years before that race finds you, and if you are no threat to them they will not destroy you.

He felt a rising anger in him as the god leader’s words came to him in the dark room, and a fear that lay deeper. He was a warrior, and a quester ... how could he give up all such pursuits, and how could he be expected to force all his people to do the same? There would be no hope wish of advance, no curiosity ... no purpose.

"Is this other race so much more advanced than we are?” he asked.

He heard a low humming from the altar and the Eye grew brighter again. They are not so much ahead of you
now … but they are more warlike, and will therefore develop more quickly. In both your races, war is a quest which you use as a release for what is in you. Your sciences questings and your wars are the same thing … you must suppress both. They are discontentment, and you will find that only in peace, if at all.

He dipped his head to one side, a gesture of acquiescence or agreement. He couldn’t argue with the god leader Kor, and he had been wrong even to think of it.

"How am I to suppress the race? Is it possible to convince each of them of the necessity for abandoning forgetting all questing?"

The Eye hummed, and grew brighter against the darkness of the carved wall behind it, but it was some time before Kor spoke again. It would be impossible to convince every one. The reasons must be kept from them, and kept from the shared memories; you must not communicate my knowledge words in any way. Consolidate your power, force peace upon them and lead them into acceptance. The knowledge questing can be made to die within them. Remember that there will be no purpose … in that they must find contentment.

The king priest leader of all Hirlaj waited a moment, and was ready to rise and leave when the Eye spoke again. You must abolish the priesthood. The knowledge which I have given to you must die when you die.

He waited for a long time in the dim, suddenly cold hall for the god leader to speak again, then slowly rose and walked to the door, the image of the Eye of Kor still bright in his vision. He stopped outside the doorway, hearing the soft wind of the city flowing slowly past the stone archway above him. One of his guards reached out and touched his mind tentatively, but he blocked his thoughts and strode heavily down the steps past them.

The sound of the wind above him rose to a screaming, and suddenly it was as though he were tumbling down the entire length of the stairway, fragments of sky and stone and faces flashing past in a kaleidoscope, and the screaming all around him. He almost reached for his bludgeon, but then he realized that he was not Tebron Marl … he was Lee Rynason, and the screaming was Horng and he was being driven out of those thoughts, tumbling through a thousand memories so fast he could not grasp any one of them.

He withdrew from Horng’s mind as though from a nightmare; he became aware of his own body, lying in the dust of Hirlaj, and he opened his eyes and motioned weakly to Mara to break the connection.

When she had done so he slowly sat up and shook his head, waiting for it to clear. For awhile he had been an ancient king of Hirlaj, and it took some time to return to the present, to his own consciousness. He was dimly aware of Mara kneeling beside him, but he couldn’t make out her words at first.

"Are you all right? Are you sure? Look up at me, Lee, please."

He found himself nodding to reassure her, and then he saw the expression on her face and felt the last wisps of alien fog clearing from his mind. There were tears in her eyes, and he touched the side of her face with his hand and said, "I’m all right. But why don’t you kiss me or something?"

She did, but before Rynason could really immerse himself in it she broke away and said, "You must have had a bad time with him! It was as though you were dead."

He grinned a trifle sheepishly and said, "Well, it was engrossing. You’d better unhook the beast; he had a bad time of it too."

Mara rose and removed the wires from Horng gingerly. Rynason remained sitting; some of the meaning of what he had just experienced was coming to him now. It certainly explained why the Hirlaji had suddenly passed from their war era into lasting peace, and why the memories had been blocked. But could he credit those memories of a voice of an alien god?

And sitting in the dust at the edge of the vast Hirlaj plain the full realization came to him, as it could not when he had been Tebron. Not only the Temple, but the Altar of Kor itself had been unmistakably the workmanship of the Outsiders.

SIX

They left Horng sitting dully at the edge of the Flat and retraced their steps through the Hirlaji ruins, still drawing no notice from the aliens. Rynason had been in some of the small planetfall towns where settlements had been established only to be abandoned by the main flow of interstellar traffic … those backwater areas where contact with the parent civilization was so slight that an entirely local culture had developed, almost as different from that of the mainstream Terran colonies as was this last vestige of the Hirlaji civilization. And in some of those areas interest in Earth was so slight that the offworlders were ignored, as the Earthmen were here … but he had never felt the total lack of attention that was here. It was not as though the Hirlaji had seen the Earthmen and grown used to them; Rynason had the feeling that to the Hirlaji the Earthmen were no more important than the winds or the dust beneath their feet.

As they passed through the settled portion of the ruins Rynason had to step around a Hirlaji who crossed his path. He walked silently past, his eyes not even flickering toward the Earthlings. Crazy grey hidepiles, Rynason thought, and he and Mara hurried out across the Flat toward the nearby Earth town.
On the outskirts of the town, where the packed-dirt streets faded into loose dust and garbage was already piled several feet high, they were met by Rene Malhomme. He sat long-legged with his back leaning against a weathered stone outcropping. He seemed old already, though he was not yet fifty; his windblown hair was almost the color of the surrounding grey dust and rock—perhaps because it was filled with that dust, Rynason thought. He stopped and looked down at the worn, tired man whose eyes belied that weariness.

"And have you communicated with God, Lee Rynason?" Malhomme asked with his rumbling, sardonic voice.

Rynason met his gaze, wondering what he wanted. He lowered the telepather pack from his shoulder and set it in the dust. Mara sat on a low rock beside him.

"Will an alien god do?" Rynason said.

Malhomme’s eyes rested on the telepather for a moment. "You spoke with Kor?" he asked.

Rynason nodded slowly. "I made a linkage with one of the Hirlaji, and tapped the race-memory. I suppose you could say I spoke with Kor."

"You have touched the alien godhead," Malhomme mused. "Then it’s real? Their god is real?"

"No," said Rynason. "Kor is a machine."

Malhomme’s head jerked up. "A machine? Deus ex machina, to quote an ancient curse. We make our own machines, and make gods of them." The tired lines of his face relaxed. "Well, that’s a bit better. The gods remain a myth, and it’s better that way."

Rynason stood over him on the windy Flat, still puzzled by his manner. He glanced at Mara, but she too was watching Malhomme, waiting for him to speak again.

Suddenly, Malhomme laughed, a dry laugh which almost rasped in his throat. "Lee Rynason, I have called men to God for so long that I almost began to believe it myself. And when the men started talking about the god of these aliens….” He shook his head, the spent laughter still drawing his mouth back into a grin. "Well, I’m glad it isn’t true. Religion wouldn’t be worth a damn if it were true."

"How did the men find out about Kor?" Rynason asked.

Malhomme spread his hands. "Manning has been talking, as usual. He ridicules the Hirlaji, and their god. And at the same time he says they are a menace."

"Why? Is he still trying to work the townsmen up against them?"

"Of course. Manning wants all the power he can get. If it means sacrificing the Hirlaji, he’ll do it." Malhomme stood up, stretching himself. "He says they may be the Outsiders, and he’s stirring up all the fear he can. He’ll grab any excuse, no matter how impossible."

"It’s not so impossible," Rynason said. "Kor is an Outsiders machine."

Malhomme stared at him. "You’re sure of that?"

He nodded. "There’s no doubt of it—I saw it from three feet away." He told Malhomme of his linkage with Horng, the contact with the memories, the mind, Tebron, and of the interview with the machine that was Kor.

Malhomme listened with fascination, his shaggy head tilted to one side, occasionally throwing in a comment or a question.

As he finished, Rynason said, "That race that Kor warned them about sounds remarkably like us. A warlike race that would crush them if they left the planet. We haven’t found any other intelligent life … just the Hirlaji, and us."

"And the Outsiders," said Malhomme.

"No. This was a race which was still growing from barbarism, at about the same level as the Hirlaji themselves. Remember, the Outsiders had already spread through a thousand star-systems long before this. No, we’re the race they were warned against."

"What about the weapons?" Malhomme said. "Disintegrators. We haven’t got anything that powerful that a man can carry in his hand. And yet the Hirlaji had them thousands of years ago."

"Yes, but for some reason they couldn’t duplicate them. It doesn’t make sense: those weapons were apparently beyond the technological level of the Hirlaji, but they had them."

"Perhaps your aliens were the Outsiders," Malhomme said. "Perhaps we see around us the remnants of a great race fallen."

Rynason shook his head.

"But they must have had some contact with the Outsiders," Mara said. "Sometime even before Tebron’s lifetime. The Outsiders could have left the disintegrators, and the machine that they thought was a god….""

"That’s just speculation," Rynason said. "Tebron himself didn’t really know where they’d come from; they’d been passed down through the priesthood for a long time, and within the priesthood they did have some secrets. I suppose if I could search the race-memory long enough I might find another nice big block there hiding that secret. But it’s difficult."
"And you may not have time," Malhomme said. "When Manning hears that the Altar of Kor was an Outsiders machine, there'll be no way left to stop him from slaughtering the Hirlaji."

"I'm not sure there'll be any real trouble," Rynason said.

Malhomme’s lips drew back into the deep lines of his face. "There is always trouble. Always. Whoever or whatever spoke through the machine knew that much about us. The only way you could stop it, Lee, would be to hold back this information from Manning. And to do that, you would have to be sure, yourself, that there is no danger from the Hirlaji. You’re in the key position, right now."

Rynason frowned. He knew Malhomme was right—it would be difficult to stop Manning if what he’d said about the man’s push for power was true. But could he be sure that the Hirlaji were as harmless as they seemed? He remembered the reassuring touch of Horng’s mind upon his own, the calmness he found in it, and the resignation … but he also remembered the fear, and the screaming, and the hot rush of anger that had touched him.

In the silence on the edge of the Flat, Mara spoke. "Lee, I think you should report it all to Manning."

"Why?"

Her face was clouded. "I’m not sure. But … when I disconnected the wires of the telepather, Horng looked at me…. Have you ever looked into his eyes, up close? It’s frightening: it makes you remember how old they are, and how strong. Lee, that creature has muscles in his face as strong as most men’s arms!"

"He just looked at you?" said Rynason. "Nothing else?"

"That’s all. But those eyes … they were so deep, and so full. You don’t usually notice them, because they’re set so deeply in the shadows of his face, but his eyes are large." She stopped, and shook her head in confusion. "I can’t really explain it. When I moved around him to the other side, I could see his eyes following me. He didn’t move, otherwise—it was as though only his eyes were alive. But they frightened me. There was much more in them than just … not seeing, or not caring. His eyes were alive."

"That’s not much evidence to make you think the Hirlaji are dangerous."

"Oh, I don’t know if they could be dangerous. But they’re not just … passive. They’re not vegetables. Not with those eyes."

"All right," Rynason said. "I’ll give Manning a full report, and we’ll put it in his hands."

He picked up the telepather pack and slung it over his shoulder. Mara stood up, shaking away the dust which had blown against her feet.

"What will you do," Malhomme asked, "if Manning decides that’s enough cause to kill the Hirlaji?"

"I’ll stop him," Rynason said. "He’s not in control here, yet."

Malhomme flashed his sardonic smile again. "Perhaps not … but if you need help, call to God. The books say nothing about alien races, but surely these must be God’s creatures too. And I’m always ready to break a few heads, if it will help." He turned and spat into the dust. "Or even just for the hell of it," he said.

Rynason found Manning that same afternoon, going over reports in his quarters. As soon as he began his description of the orders given to Tebron he found that Malhomme’s warnings had been correct.

"What did this machine say about us?" Manning asked sharply. "Why were the Hirlaji supposed to stay away from us?"

"Because we’re a warlike race. The idea was that if the Hirlaji stayed out of space they’d have about five thousand years before we found them."

"How long ago was all this? I had your report here…."

"At least eight thousand years," Rynason said. "They overestimated us."

Manning stood up, scowling. There were heavy lines around his eyes and he hadn’t trimmed his thin beard. Whatever he was working on, Rynason thought, he was putting a lot of effort into it.

"This doesn’t make sense, Lee. Damn it, since when do machines make guesses? Wrong ones, at that?"

Rynason shrugged. "Well, you’ve got to remember that this was an alien machine; maybe that’s the way they built them."

Manning threw a cold glance at him and poured a glass of Sector Three brandy for himself. "You’re not being amusing," he said shortly. "Now, go on, and make some sense."

"I’d like to," Rynason said. "Frankly, my theory is that the machine was a communication-link with the Outsiders. It could explain a lot of things—maybe even the similarities in architecture."

Manning scowled and turned away from him. He paced heavily across the room and looked out through the plasticene window at the nearly empty, dust-strewn street for a few moments; when he returned the frown was still on his face.

"Damn it, Lee, you’re not keeping your mind on the problems here. While you were looking into Horng’s mind, how do you know he wasn’t spying in yours? You had an equal hookup, right?"

Rynason nodded. "I couldn’t have prevented him in any case. Why? Are we supposed to be hiding anything?"
"I told you not to trust them!" Manning snapped. "Now if you can’t even match wits with a senile horsehead..."

"You were the one who said they might be more adept at telepathy than we are," Rynason said. "It was a chance we had to take."

"There’s a difference between taking chances and handing them information on a silver platter," Manning said angrily. "Did you make any effort at all to keep him from finding out too much about us?"

Rynason shrugged. "I kept him pretty busy. All of the time I was running through Tebron’s memories I could feel Horng screaming somewhere; he must have been too upset to do any probing in my mind."

Manning was silent for a moment. "Let’s hope so," he said shortly. "If they find out how weak we are, how long it would take us to get reinforcements out here...."

"They’re still just a dying race, remember," Rynason said. "They’re not the Outsiders. What makes you so sure that they’re dangerous?"

"Oh, come on, Lee! Think! They’re in contact with the Outsiders; you said so yourself. And just remember this: the Outsiders obviously considered it inevitable that there would be war between us. Now put those two facts together and tell me the horses aren’t dangerous!"

Rynason said slowly, "It isn’t as simple as that. The order given to Tebron was to stop all scientific progress and stifle any military development, and he seems to have done just that. The idea was that if the Hirlaji were harmless when we found them there might be no need for fighting."

"Perhaps. But we weren’t supposed to know that they were in contact with the Outsiders, either—that was probably part of the purpose of the block in the race-memory. But we got through the block, and they know it, and presumably by now the Outsiders know it. That changes the picture, and I’d like to know just how much it changes it."

"They’re not in contact with the Outsiders any longer," said Rynason.

"What makes you so sure of that?"

"Tebron broke the contact—that was in the orders too. The priesthood, which had been the connecting link with the Outsiders through the machine, was disbanded. When Tebron died he didn’t appoint a successor; the machine hasn’t been used since."

Manning thought about that, still frowning. "Where is the machine?"

"I don’t know. If it hasn’t been kept in repair it might not even be usable any more, wherever it is."

"I’ll tell you something, Lee," said Manning. "There’s still too much that we don’t know—and too much that the Hirlaji do know, now. Whether or not your horse-buddy was picking your brains, they know we’re not as strong as they thought we were. It took us eight thousand years to get here instead of five thousand. Let’s just hope they don’t think about that too much."

He stopped, and paced to the window again. "Look around you, Lee—out on the street, in the town. We’ve hardly put our feet down on this planet; we’ve got very little in the way of weapons with us and it will take weeks to get any more in here; there’s practically no organization here yet. We could be wiped off this planet before we knew what hit us. We’re sitting ducks."

He came back to stand before Rynason. "And what about the Outsiders? They think of us strictly in terms of war, and they’ve been keeping themselves away from us all this time. That’s obviously why they pulled out of this sector of space. Up until now we’d thought they were dead. But now we find they’ve been in contact with this planet... all right, it was eight thousand years ago. But that’s a lot more recent than the last evidences we’ve had of them, and they’ve obviously been watching us."

"Now, you’ve been in direct contact with the horses’ minds; you’ve practically been one of them yourself, for awhile. All right, what’s their reaction going to be when they realize that the Outsiders, their god, overestimated us? What will they do?"

Rynason thought about that. He tried to remember the minds he had touched during the linkage with Horng: Tebron, the ancient warrior-king, and the young Hirlaji staring at the buildings of one of the ancient cities, and the old, dying one who had decided not to plant again one year... and Horng himself, tired and calm on the edge of the Flat, amid the ruins of a city. He remembered the others in that crumbling last home of an entire race... slow, quiet, uncaring.

"I don’t think they’ll do anything. They wouldn’t see any point to it." He paused, remembering. "They lost all their purpose eight thousand years ago," he said quietly.

Manning grunted. "Somehow I lack your touching faith in them."

"And somehow," Rynason said, "I lack your burning ambition to find an enemy, a handy menace to crush. You argue too hard, Manning."

Manning raised an eyebrow. "I suppose I haven’t even put a doubt in your mind about them? Not one doubt?"
Rynason turned away and didn’t answer.

Manning sighed. "Maybe it’s time I went out there myself and had a seance with the horses." He set down his glass of brandy, which he had been turning in his hand as he spoke. "Lee, I want you to check back here with me in two hours … by then I should have things straightened up and ready to go."

He strode to the supply closet at one end of the room and took from it a belt and holster, from which he removed a recent-model regulation stunner. "This is as powerful a weapon as we have here so far, except for the heavy stuff. I hope we never have to use any of that—clearing it for use is a lot of red tape." He looked up and saw the cold expression on Rynason’s face. "Of course, I hope we don’t have to use the stunners, either," he said calmly.

Rynason turned without a word and went to the door. He stopped there for a moment and watched Manning checking over the weapon. He was thinking of the disintegrators he had seen on the steps of the Temple of Kor, and of the shell of a body tumbling out of the shadows.

"I'll see you at 600," he said.

SEVEN

Rynason spent the next two hours in town, moving through the windy streets and thinking about what Manning had said. He was right, in a way: this was no more than a foothold for the Earthmen, a touchdown point. It wasn’t even a community yet; buildings were still going up, prices varied widely not only between landings of spacers but also according to who did the selling. A lot of the men here were trying some mining out on the west Flat; their findings had so far been small but they brought the only real income the planet had so far yielded. The rest of the town was rising on its own weight: bars, rooming houses, laundries, and diners—establishments which thrived only because there were men here to patronize them. Several weeks before a few of the men had tried killing and eating the small animals who darted through the alleys, but too many of those men had died and the practice had been quickly abandoned. And they had noticed that when those animals foraged in the refuse heaps outside the town, they died too.

A few of the big corporations had sent out field men to look around, but it was too soon for any industry to have established itself here; all the planet offered so far was room to expand. Despite the wide expansion of the Earthmen through the stars, a planet where conditions were at all favorable for living was not to be overlooked; the continuing population explosion, despite tight regulations on the inner worlds, had kept up with the colonization of these worlds, and new room was constantly needed.

But the planetfall on Hirlaj was still new. A handful of Earthmen had come, but they had not yet brought their civilization with them. They stood precariously on the Flat, waiting for more settlers to come in and build with them. If there should be trouble before more men arrived….

At 600 Rynason walked out on the dirt-packed street to Manning’s quarters. He met Marc Stoworth and Jules Lessingham coming out the door. They looked worried.

"What’s wrong?" he said.

They didn’t stop as they went by. "Ask the old man," said Stoworth, going past with an uncharacteristically hurried step.

Rynason went on in through the open door. Manning was in the front room, amid several crates of stunner-units. He looked up quickly as Rynason entered and waved brusquely to him.

"Help me get this stuff unloaded, Lee."

Rynason fished for his sheath-knife and started cutting open one of the crates. "Why are you unloading the arsenal?"

"Because we may need it. Couple of the boys were just out at the horse-pasture, and they say the friendly natives have disappeared."

"Jules and Stoworth? I met them on the way in."

"They were doing some follow-up work out there … or at least they were going to. There’s not a single one of them there, not a trace of them."

Rynason frowned. "They were all there this morning."

"They’re not there now!" Manning snapped. "I don’t like it, not after what you’ve told me. We’re going to look for them."

"With stunners?"

"Yes. Right now Mara is out at the field clearing several of the fliers to use in scouting for them."

Rynason stacked the boxes of weapons and power-packs on the floor where Manning indicated. There were about forty of them—blunt-barrelled guns with thick casing around the powerpacks, weighing about ten pounds each. They looked as statically blunt as anvils, but they could stun any animal at two hundred yards; within a two-foot range, they could shake a rock wall down.

"How many men are we taking with us?" Rynason asked, eying the stacks on the floor.
Manning looked up at him briefly. "As many as we can get. I'm calling a militia; Stoworth and Lessingham went into town to round up some men."

So he was going ahead with the power-grab; Malhomme had been right. No danger had been proven yet, but that wouldn't stop Manning—nor the drifters he'd been buying in the town. Killing was an everyday thing to them.

"How many of the Hirlaji do you think we'll have to kill to make it look important to the Council?" Rynason asked after a moment, his voice deliberately inflectionless.

Manning looked up at him with a calculating eye. Rynason met his gaze directly, daring the man to take offense. He didn't.

"All right, it's a break for me," Manning shrugged. "What did you expect? There's precious little opportunity on this desert rock for leadership in any sense that you might approve of." He paused. "I don't know if it will be necessary to kill any of them. Take it easy and we'll see."

Rynason's eyes were cold. "All right, we'll see. But just remember, I'll be watching just as closely as you. If you start any violence that isn't necessary… ."

"What will you do, Lee?" said Manning. "Report me to the Council? They'll listen to me before they'd pay attention to complaints from a nobody who's been drifting around the outworlds for most of his life. That's all you are, you know, Lee—a drifter, a bum, like the rest of them. That's what everybody out here on the Edge is … unless he does something about it.

"I hold the reins right now. If I decide to do something that you don't like, you won't be able to stop me … neither you, nor your female friend."

"So Mara's against you too?" Rynason said.

"She made a few remarks earlier," Manning said calmly. "She may regret it soon enough."

Rynason looked at the man through narrowed eyes for a moment, then strapped on a gunbelt and loaded one of the stunners. He snapped it into the holster carefully, wondering just what Manning had meant by his last remark. Was it a threat in any real sense, or was Manning just letting off steam? Well, they'd see about that too … and Rynason would be watching.

Within half an hour close to sixty men had collected outside Manning's door. They were dirty and unshaven; some of them were working in the town, a few were miners, but most of them were drifters who had followed the advance of the star frontier, who drank and brawled in the streets of the town, sleeping by day and raising hell at night. They stole when they could, killed when they wanted.

The drifters were men who had been all over the worlds of the Edge, who had spent years watching the new planets opened for colonization and exploitation, but had never got their own piece. They knew the feel of these planetfall towns on the Edge, and could talk for hours about the worlds they had seen. But they were city men, all of them; they had seen the untamed worlds, but only from the streets. They hadn't taken part in the exploring or the building, only in the initial touchdowns. When the building was done, they signed on to the spacers again and drifted to the next world, farther out.

Rynason looked at their faces from where he stood in the doorway, listening to Manning talking to them. They were hard men, mean and sometimes vicious. Nameless faces, all of them, having no place in the more developed areas of the Terran civilization. And maybe that was their own fault. But Rynason knew that they were running, not to anything, but from the civilization itself. Running … because when an area was settled and started to become respectable, they began to see what they did not have. The temporary quarters would come down, to be replaced by permanent buildings that were meant to be lived in, not just as places for sleeping. Closets, and shelters for landcars; quadsense receivers and food integrators. They didn't want to see that … because they hated it, or because they wanted it? It didn't matter, Rynason decided. They ran, and now they were here on the Edge with all their anger and frustration, and Manning was ready to give them a way to let it out.

At the side of the mob he saw a familiar grey shock of hair—Rene Malhomme. Was he with them, then? Rynason craned his neck for a better view, and for a moment the crowd parted enough to let him see Malhomme's face. He was looking directly toward Rynason, holding a dully gleaming knife flat against his thick chest … and his lips were drawn back into the crooked, sardonic smile which Rynason had seen many times. No, Malhomme at least was not part of this mob.

"We already know which direction they went," Manning was saying. "Lessingham will be in charge of the main body, and you'll follow him. If he gives you an order, take it. This is a serious business; we won't have room for bickering.

"Some of us will be scouting with the flyers. Well be in radio contact with you. When we find out where they are we'll reconnoiter and make our plans from there."

Manning paused, looking appraisingly at the faces before him. "Most of you are armed already, I see. We have some extra stunners here; if you need them, come on up. But remember, the men who carry the shockers will be in
front; and their business will be simply to down the horses—any killing that’s to be done will be left to those of you who have knives, or anything lethal."

There was a rising wave of voices from the crowd. Some men came forward for weapons; Rynason saw others drawing knives and hatchets, and a few of them had heavy guns, projectile type. Rynason watched with narrowed eyes; it had been a filthy maneuver on Manning’s part to organize this mob, and his open acceptance of their temper was dangerous. Once they were turned loose, what could stop them?

There was a sudden shouting in the back of the mob; men surged and fell away, cursing. Rynason heard scuffling back there, and sounds of bone meeting flesh. The men at the front of the mob turned to look back, and some tried to shove their way through to the fight.

A scream came from the midst of the crowd, and was answered by an excited, angry swelling of voices around the fighting men. Suddenly Manning was among them, smashing his way through with a stunner in his hand, swinging it like a club.

"Get the hell out of the way!" he shouted, stepping quickly through the men. They grumbled and fell back to let him by, but Rynason heard the men still fighting in the rear, and then he saw them. There were three of them, two men and what looked like a boy still in his teens. The boy had red hair and a dark, ruddy complexion: he was new to the outworlds. The two older men had the pallor of the Edge drifters, nurtured in the artificial light of spacers and sealed survival quarters on the less hospitable worlds.

The larger of the two men had a knife, a heavy blade of a type that was common out here; many of the men used them as hatchets when necessary. This one dripped with blood; the smaller man’s left arm was torn open just below the shoulder, and hanging uselessly. He stood swaying in the dust, hurling a string of curses at the man with the knife, while the boy stood slightly behind him, staring with both fear and hatred in his eyes. He had a smaller knife, but he held it loosely and uncertainly at his side.

Manning stepped between them. He had sized up the situation already, and he paused now only long enough to bite out three short, clipped words which told these men exactly what he thought of them. The man with the knife stopped back and muttered something which Rynason didn’t hear.

Manning raised the stunner coldly and let him have it. The blast caught the man in the shoulder and spun him around, throwing him into the crowd; several of them went down. The long knife fell to the ground, where dirt mixed with the blood on it. There was silence.

Manning looked around him, swinging the stunner loosely in his hand. After a moment he said calmly, but loud enough for all to hear, "We won’t have time for fighting among ourselves. The next man who starts anything will be killed outright. Now get these men out of here." He turned and strode back through the mob while the boy and a couple of the other men took the wounded away.

Malhomme had moved further into the crowd. He was strangely silent; usually he went among these men roughly and jovially, cursing them all with goodnatured ease. But now he stood watching the men around him with a frown creasing his heavily lined face. Malhomme was worried, and Rynason, seeing that, felt his stomach tighten.

Manning faced the men from the front of the crowd. He stared at them shrewdly, holding each man’s gaze for a few seconds. Then he grinned, and said, "Save it for the horses, boys. Save it for them."

Rynason rode out to the field with Manning, Stoworth, and a few of the others. It was a short trip in the landcar, and none of them spoke much. Even Stoworth rode silently, his usual easy flow of trivia forgotten. Rynason was thinking about Manning: he had handled the outbreak quickly and decisively enough, keeping the men in line, but it had been only a temporary measure. They would be expecting some real action soon, and Manning was already offering them the Hirlaji. If the alarm turned out to be a false one, would he be as easily able to stop them then?

Or would he even try?

The flyers were ready when they got to the field, but Mara was gone. Les Harcourt met them at the radio office on the edge of the field; he was the communications man out here. He led them into the low, quick-concrete construction office and shoved some forms at Manning to be signed.

"If there’s any trouble, you’ll be responsible for it," he said to Manning. "The men can look out for themselves, but the flyers are Company property."

Manning scowled impatiently and bent to sign the papers.

"Where’s Mara?" Rynason asked.

"She’s already taken one of the flyers out," Harcourt said. "Left ten minutes ago. We’ve got her screen in the next room." He waved a hand toward the door in the rear of the room.

Rynason went on back and found the live set. The screen, monitored from a camera on the flyer, showed the foothills of the southern mountains over which Mara was flying. They were bare and blunt; the rock outcroppings which thrust up from the Flat had been weathered smooth in the passage of years. Mara was passing over a low range and on to the desert beyond.
Rynason picked up the mike. "Mara, this is Lee; we just got here. Have you found them yet?"

Her voice came thinly over the speaker. "Not yet. I thought I saw some movement in one of the passes, but the light wasn’t too good. I’m looking for that pass again."

"All right. We’ll be going up ourselves in a few minutes; if you find them, be careful. Wait for us."

He refitted the mike in its stand and rose. But as he turned to the door her voice came again: "There they are!"

He looked at the screen, but for the moment he couldn’t see anything. Mara’s flyer was coming down out of the rocky hills now, the Flat stretching before her on the screen. Rynason could see the pass through which she had been flying, but there was no movement there; it took him several seconds to see the low ruins off to the right, and the figures moving through them.

The screen banked and turned toward them; she was lowering her altitude.

"I see them," he said into the mike. "Can’t make out what they’re doing, on the screen. Can you see them any more clearly?"

"They’re entering one of the buildings down there," she said after a moment. "I’ve counted almost twenty of them so far; they must all be here."

"Can you go down and see what they’re doing? The sooner we find out, the better: Manning’s got a pretty ugly bunch of so-called vigilantes on the way out there."

She didn’t reply, but on the screen she could see the crumbling buildings grow larger and nearer. He could make out individual structures now: a wall had fallen and was half-buried in the dust and sand; an entire roof had caved in on another building, leaving only rubble in the interior. It was difficult to tell sometimes when the original lines of the buildings had fallen: they had all been smoothed by the wind-blown sand, so that broken pillars looked almost as though they had been built that way, smooth and upright, solitary.

At last, he saw the Hirlaji. They were slowly mounting the steps of one of the largest of the buildings and passing into the shadows of the interior. This building was not as deteriorated as most of the others; as Mara’s flyer dipped low over it Rynason could see its characteristic lines unbroken and clear.

With a start, he sat up and said hurriedly, "Mara, take another close pass over that building, the one they’re entering."

In a moment she came in again over the smooth stone structure, and Rynason looked closely at the screen. There was no mistaking it now: the high steep steps leading up to a colonnade which almost circled the building, the large carvings over the main entrance.

"You’d better set down away from them!" he said. "That’s the Temple of Kor!" But even as he finished speaking the image on the screen jolted and rocked, and the flyer dipped even closer toward the jumbled ruins below.

"They’re firing something!"

He saw that she was trying to gain altitude, but something was wrong: the buildings on the screen dipped and wavered, up and down, spinning.

"Mara! Pull up—get out of there!"

"One of the wings is damaged," she said quickly, and suddenly there was another jolt on the screen and he heard her gasp. The picture spun and righted itself, seemed to hang motionless for a moment, and then the stone wall of one of the buildings was directly ahead and growing larger.

"Mara!"

The image spun wildly, the building filled the screen, and then it went black; he heard a crash from the speaker, cut off almost before it had sounded. The room was silent.

EIGHT

Rynason stared at the dead screen for only a moment; he wheeled and ran back to the outer room.

"Let’s get those flyers up! Mara’s found them, but they’ve brought her down." He was already going out the door as he spoke.

Manning and the others were right behind him as he dashed out onto the field. Rynason headed for the nearest flyer, a small runabout which had been discarded as obsolete on the inner worlds and consigned to use out here on the Edge, where equipment was scarce. He leaped through the port and was shutting the door when Manning caught it.

"Where are they? What’s happened to the woman?"

"They were shooting something!" Rynason snapped. The knife-scar over his right eye stood out sharply in his anger. "She crashed—may be badly hurt. She didn’t have too much altitude, though. The hell with where she is—follow me!"

He slammed the door and squeezed into the flying seat. While he warmed the engines he saw the others scattering across the field to the other flyers. In a moment the hum of the radio set told him that their
communications were open. He saw the props of the other flyers starting to turn, and flicked on his mike.

"They’re on the other side of the south range," he said quickly. "She didn’t give me coordinates, but I should be able to find the spot. When we get there, we land away from the city and go in on foot."

Manning’s voice came coldly through the radioset: "Are you giving orders now, Lee?"

"Right now I am, yes! If you want to try going in before reconnoitering, that’s your funeral. They have weapons."

"When we touch ground again I’ll take over," Manning said. "Now let’s get going—Lee, you’re first."

But Rynason was already starting his run across the field. When he had some speed he kicked in the rocket booster and fought the little flyer skyward. When he had caught the air he banked southward and fed the motors all he had. He didn’t look around for the others; he was setting his own pace.

The mountain range was ten miles to the south; they should be able to make it in five or six minutes, he figured. Below him on the dry Flat he saw the pale shadow of his flyer skimming across the dust. The drone of the motors filled the compartment.

The radio cut in again. It was Manning. "What’s this about a city, Lee? Is that where they are?"

"The City of the Temple," Rynason said. "It’s down among overhanging rocks—no wonder we hadn’t seen it before. Doesn’t seem to have been used for centuries or more. But that’s where the Temple of Kor is—and the Hirlaji are all in the Temple."

Static hissed at him for a moment. "How did they bring her down?" someone asked. It sounded like Stoworth.

"Probably the disintegrators," Rynason said. "The Hirlaji don’t have many of them, but they’ve got enough power to give us a lot of trouble."

"And they’re using them, eh?" Manning said. "What do you think of your horses now, Lee?"

Rynason didn’t answer.

In a few minutes they were over the range. Rynason had to scout for awhile before he found the pass he had seen on Mara’s screen, but once he saw it below him he followed it out to the other side. The city was there, lying darkly amid the shadows of the mountains. Rynason banked off and set down half a mile away.

He waited for the others to land before he left the flyer. He took a pair of binocs from the supply kit and trained them on the city across the Flat, but he couldn’t find Mara’s fallen flyer.

When they were all down he clambered out of the compartment and alighted heavily in the dust. Manning strode quickly to him, wearing twin stunners. He took one from its holster and fingered it thoughtfully as he spoke.

"The main party was back in the pass. They should be here inside half an hour. We’ll storm the temple immediately—we’ve got them outnumbered."

Rynason made a dubious sound deep in his throat, looking out at the city. He was remembering that he had seen it before from this Flat … and had stormed it before. The defensive walls were high.

"They can fire down on us from the walls," he said in a low voice. "There’s no cover out there—they’d wipe half of us out before we could get in."

"We can come around from the pass," Manning said. "There’s plenty of cover from that direction."

"And more fortification, too!" Rynason snapped. "Just remember, Manning, that city was built as a fortress. We’d have to come from the Flat."

Manning paused, frowning. "We’ve got to take them anyway," he said slowly. "Damn it, we can’t just stand here and wait for them to come out at us. What are they doing, anyway?"

Rynason regarded the older man for several moments, almost amused. "Right now," he said, "they’re probably having a conference—with the Outsiders. That’s where the machine is, remember."

"Then the sooner we attack, the better," Manning said. "Marc, get the main party on the hand-radio—tell them to get here as fast as they can." He turned for a moment to look out across the Flat at the city. "And you can promise them some action," he said.

Stoworth dropped the radio from his shoulder and threw back the cover. He switched on the power, and static sounded in the dry air. He lifted the mike … and a voice cut through the static.

"Is anyone picking this up? Is anyone there?"

It was Mara’s voice.

Rynason knelt beside the set and took the mike from Stoworth’s hand. "This is Lee. Are you hurt?"

"Lee?"

"I hear you. Are you hurt?"

"Not badly. Lee, what are you doing? I saw the flyers land."

"Manning wants to attack the city as soon as the land party gets here. What’s going on there?"

"I’m … in the temple. I’ve been trying to communicate with them. I’ve got an interpreter, but they don’t listen to what I say. Lee, this is incredible here! They’ve brought out a lot of weapons … some of them don’t work. The
hall is half-filled with dust and sand, and they move so clumsily! They’re trying to hurry, because they saw you too, but it’s like … like they’ve forgotten how. They think they can get rid of us all, but they…. It’s pitiful—they’re so slow."

"Those disintegrators aren’t slow," Rynason said. Manning was standing beside him; he dropped a hand on his shoulder, but Rynason shook it off. "Are they using the machine … the altar?"

"They were using it when they brought me in. I think it is the Outsiders. But they don’t seem to know it’s just a machine—they kneel in front of it, and chant. It’s so strange, in that language of theirs … those thin, high voices, and the echoes…."

"They’re holding you prisoner?"

"Yes. I think they want to hold you off till they can get ready for their own attack."

"For their what?" Rynason stood up, and looked toward the city; he could see no movement there.

"I know … it’s incredible. Lee, they don’t know what they’re doing. Horng said on the interpreter that they were going to drive us off the planet, and then rebuild their cities, and re-arm. It’s something to do with Kor, or the Outsiders. The orders have changed. They think that if they can drive us away for awhile they can build themselves up to where they can repel any further touchdowns here."

"This order came from the machine?"

"Yes. There was a mistake, and Horng realized it after you linked with him this morning. The Outsiders, or Kor or whatever it is, had overestimated us."

"Maybe then, but not now. They’re committing suicide!" Rynason said.

"I know, and I tried to tell them that. But the machine says differently. Lee, do you think that’s really the Outsiders?"

"If it is," he said slowly, "they wouldn’t send the Hirlaji against us without some help." He thought a minute, while the wind of the Flat blew sand against his leg and static came from the radio. "They could be making another mistake!" Mara said. "I’m sure what they told the Outsiders wasn’t true—they think they’re as strong as they were before. But their eyes … their eyes are afraid. I know it."

"Do they know what you’re saying to me?"

"No. Lee, I’m not even sure they know what a radio is. Maybe they think I carry my portable altar with me." Her voice had taken on a frantic note. "It’s a … a simple case of freedom of religion, Lee! Freedom of religion!"

"Mara! Calm down! Calm down!" He waited for a few seconds, until her voice came again, more quietly:

"I’m sorry … it’s just that they’re so…..."

"Forget it. Sit tight there. I think I know how to slip in—alone." He switched off.

He stood up and shrugged his shoulders heavily, loosening his tensed muscles. Then he turned purposefully to Manning.

"The rest of the party won’t be here for awhile yet, so you can’t possibly go in now. I’m going to try to get Mara out before any fighting starts."

"What if they capture you too?" Manning said. "I can’t hold off an attack too long—you could be right about the Outsiders helping them. The sooner we finish them off, the better."

Rynason looked coldly at him. "You heard what Mara said. We won’t have any trouble taking them. You can’t attack them while she’s in there, though. Or can you?"

"Lee. I’ve told you—I can’t take chances. If the Outsiders are in this, it’s a dangerous business. You can go in if you want, but we’re not waiting more than half an hour for you to get out." Rynason met his gaze steadily for a moment, then nodded brusquely. "All right." He turned and moved into the over-hanging shadows of the mountains, toward the ancient, alien city.

He stayed in the shadows as he approached the walls of the fortress, darting quickly across exposed ground. The Hirlaji were large and powerful, physical battle with them was of course out of the question. But he had some things on his side: he was small, and therefore less likely to be seen; he was faster than the quiet, aged aliens. And he knew the city, the fortress and the temple, almost as well as they did.

Perhaps better, in fact, for his purposes. For while he had shared Tebron’s mind he had been … not only Tebron, but also Rynason, Earthman. A corner of his mind had been alert and aware … hearing the distant screams of Horng, wondering about the design of the Altar of Kor. And he had seen other things when he looked through Tebron’s eyes: when the ancient warlord had stormed the city-fortress, there had been an observer in him who had said: An Earthman could go in this way, unobserved. A smaller attacker could slip through here, could conceal himself where no Hirlaji could reach.

He arrived, at last, at the base of the wall where the blunt rocks of the mountains tumbled to a dead-end against flat, weathered stone. So far he must not have been seen; there had been no disintegrator beams fired at him, no leathery Hirlaji heads watching from the walls. He flattened against the stone and raised his eyes to the barriers.
The wall here had been built higher than the portions which faced the Flat, and it was stronger. No one had tried to storm the city from this position, because it was too well protected. But the walls had been built against the heavy, clumsy bodies of the grey aliens; with luck, a man could scale this wall. The footholds in the weathered stones would be precarious, but perhaps it could be done. And the Hirlaji, who regarded this wall as impregnable, would not be guarding it.

Sighting upward from flat against the wall, he chose his path quickly, and began to climb. The stone was smooth but grainy; he dug his fingers into narrow niches and pulled himself slowly upward, bracing himself with footholds whenever he could. It was laborious, painful work; twice he lost handholds and hung precariously until his straining fingers again found some indentation. Sweat covered him; the wind from the Flat whipped around the wall and touched the moisture on his back coldly. But his face was set in a frozen grimness and though his breath came in gasps he made no other sound.

When he had neared the top he suddenly seemed to reach a dead-end; the stones were smooth above him. His arms ached, his shoulders seemed deadened; he clung numbly to the wall and searched for another path. When he found it, he had to descend ten feet and move to the right before he could re-ascent; as he retraced his route down the wall he noticed blood where his torn fingers had left their mark. But he could not feel the pain in his fingers.

At last, when the wall had come to seem a separate world of existence which was all that he would ever know, a vertical plane to which he clung with dim determination, hardly knowing why any longer … at last, he reached the top. His groping hand reached up and found the edge of the wall; his fingers grasped it gratefully and he pulled himself up to hang by both hands and survey the interior of the fortress.

A deserted floor stretched before him, shadowed by the late-afternoon darkness which crept down from the mountains to rest on the aged remains of the city. Forty feet down the walkway he saw stairs descending, but his head swam and all he could focus on clearly was the light film of dust and sand which covered even this topmost level of the city, blown in shallow drifts against the walls which rose a few feet above the floor here. There were no footprints in that dust; no one had walked here for thousands of years.

Wearily, he pulled himself over the last barrier and fell numbly to the floor, where he lay for long minutes fighting for breath. His lungs were raw; the thin air of the planet caught and rasped in his throat. His hands were torn and bleeding, and the knife-scar over his right eye had begun to throb, but he ignored the pain. He had to clear his head….

Eventually he was able to stand, swaying beneath the dark sky. Below him he saw the city, broken and dim, empty streets winding between fallen walls and pillars. Mara’s flyer lay shattered against one of those broken walls; seeing it, he wondered how badly she had been hurt.

He moved toward the stairs, and descended them slowly. The stairs of the city were as he had remembered them from Tebron’s memories, and yet not the same. To the Earthman they were steep: the steps were like separate levels, three feet across and almost four feet deep. His legs ached at each step as the shock of his weight fell on them.

He reached the bottom level and paused in the doorway onto the street. It was empty, but he had to think a moment before he could remember his bearings. Yes, the Temple was that way, somewhere down the dusty street. He moved through the deeper shadows at the base of the buildings, remembering.

Tebron had taken this city at the head of a force of warriors. To him it had been large and majestic, a place of power and knowledge. But Rynason, moving wearily through the dust of the ages which had fallen upon the city since the ancient king, found it not merely large, but huge; not majestic, but futile. And the power and knowledge which it once had held was but a dusty shadow now. Somewhere ahead, in the Temple, the survivors of that ages-old culture were trying to bring the city to life again. With or without the Outsiders, he felt, they must fail. They really wanted to bring themselves back to life, to reawaken their minds, their dreams, their own power. But they tried to do it with memories, and that was not the way.

No one was guarding the Temple. Rynason went up the steps as quickly as he could, vaulting from level to level, trying to stay in the shadows, listening for movement. But sounds did not carry far in the air of Hirlaj; the aliens would not hear him approaching, but he might not hear any of them either until he stumbled upon them.

At the top of the stairs he darted into the shadows of the colonnade which surrounded the interior. Doorways opened at intervals of fifty feet around the building; he would have to circle to the side and enter there if at all. He slipped quickly between the columns and paused at the third doorway. He dropped to the floor, lay flat on his chest and looked inside.

They were all there—two dozen heavy grey aliens, sitting, standing, staring quietly at the floor. There was little movement among them, but nevertheless he could feel the excitement which pervaded the Temple. No, not excitement—anxiety. Fear. Watching those huge bodies huddling into themselves, he heard an echo of Horng’s screams in his mind. These creatures were afraid of battle, of conflict, and yet they had thrust themselves into a fight.
which they must lose. Did they know that? Could they believe what the machine of the Outsiders told them, after it had been proven fallible?

The Eye of Kor glowed dully in the dark inner room; two of the Hirlaji stood silently before it, watching, waiting. But the religion of Kor had played no part in the lives of the Hirlaji for generations. Now that the ancient, muddled religion had been brought to life again, could it have the same hold on them that it had once had?

Mara was on the floor of the Temple, leaning with her back against the wall. One of the doorways from the outer colonnade was nearby, but five of the Hirlaji surrounded her. And with a start Rynason noticed that her left arm hung limp and twisted at her side, and blood showed on her forehead. Her face showed no emotion, but as he watched she raised her right hand to run fingers through her long dark hair, nervously.

She had not seen him, but she was waiting. When he made his move she would follow him. Rynason slipped back from the doorway and circled the building again until he had reached the entrance nearest the girl. He drew out his stunner from its holster and looked at it for a moment. He would have to be fast; his weapon would give him no advantage against the disintegrators of the Hirlaji, but surprise and speed might. And, perhaps … fear.

He broke around the corner of the doorway at a dead run, firing as he went. Two of the Hirlaji fell before they could even turn; they crumpled to the floor heavily. Then he screamed—a high scream, like Horng’s, and as loud as he could make it, a wail, a cry of anguish and terror and pain. They felt it, and it touched a response in them; the Hirlaji who surrounded Mara twisted to look at him, but they instinctively shrank away. He continued to fire, bringing down three more of them while the confusion lasted. He broke through to Mara, who was already on her feet; without breaking his stride he grasped her by her good shoulder and pulled her along with him as he ran through.

But some of the Hirlaji recovered in time to block their escape. Rynason wheeled, looking frantically around the room for an unguarded exit. None of those within reach were clear. He fired again, and ran for the altar.

One of the Hirlaji had raised a disintegrator; Rynason caught him with the stunner as he fired, and the beam of the alien’s weapon shot past his leg, digging a pit into the floor beyond him. Other weapons were raised now; they had only seconds left.

But they had reached the altar; the two Hirlaji there moved to block them, but they were unarmed and Rynason dropped them with the stunner. He pushed Mara past them and around to the side of the altar, seeking cover from the disintegrators.

Behind the altar, there was a space just large enough for them to squeeze through. Rynason’s heart leaped; he pointed quickly to it and turned to fire again as Mara pushed her way into the narrow aperture. A disintegrator beam hissed over his head; another tore into the wall two feet away from him. The Hirlaji were trying to keep their fire away from the altar itself.

Rynason turned and squeezed behind the altar as soon as Mara was clear. It was tight, but he made it, and once through the narrow opening they found more room in the darkness. They could hear noise outside as the Hirlaji moved toward the altar, but it sounded far away and dim. Mara moved back into the darkness, and he followed.

They moved perhaps twenty feet into the wall behind the altar before they were brought to a halt. The passage ended. Well, no matter; if it was not an escape route, at least it would afford cover from the weapons of the Hirlaji. Rynason dropped to the floor and rested.

Mara sat beside him. "Lee, you shouldn’t have tried it," she said anxiously. "Now we’re trapped." He felt her hand touch his face in the darkness.

"Maybe," he said. "But we may be able to catch them off their guard again, and if so we may be able to get out."

She was silent. He felt her lean against his shoulder wearily, her hair soft against his neck. Then he remembered that she had been hurt.

"What happened to your arm? And you were bleeding."

"I think it’s broken. The bleeding was nothing, though: you should see yourself. You were so tattered and bloody when you came in that I hardly knew you. Knights should come in more properly shining armor."

He grinned wearily. "Wait till next time."

"Lee, where are we?" she said abruptly. Their eyes were becoming adjusted to the darkness, and they could see rising around them a complexity of machine relays, connectives, and pieces which did not seem to make sense.

Rynason looked more closely at the complex. It was definitely Outsiders work, but what was it? Part of the Altar of Kor, obviously, but the Outsiders telecommunicators had never used such extensive machinery. Yet it did look familiar. He tried to remember the different types of Outsiders machinery which had been found and partially reconstructed by the advancing Earthmen in the centuries past. There weren’t many. . . .

Then, suddenly, he had it, and it was so simple that he was surprised he hadn’t thought of it before.

"This is Kor," he said. "It’s not a communicator—it’s a computer. An Outsiders computer."
Mara’s frown deepened; she looked around them in the dimness, her eyes taking in the complexity and extent of the circuitry. It faded into the darkness behind them; lines ran into the walls and floor.

"They built their computers in the grand manner, didn’t they?" she said softly.

"I’ve seen fragments of them before," Rynason said. "This is a big one—no telling how much area the total complex takes up. One thing’s certain, though: it’s no ordinary computer of theirs. Not for plain math-work, nor even for specialized computations, like the one on Rigel II—that was apparently used for astrogation, but it wasn’t half the size of this. And navigation between stars, even with the kind of drive they must have had, is no simple problem."

"The Hirlaji think it’s a god," she said.

"That raised another problem," Rynason mused. "The Outsiders built it, and must have left it here when they pulled back to wherever they were going … if they ever left the planet. But the Hirlaji use it, and they communicate with it verbally. The Hirlaji are apparently responsible for keeping it protected since then. But why should the Hirlaji be able to use it?"

"Unless they’re the Outsiders after all?" said Mara.

Rynason frowned. "No, I’m still not convinced of that. The clue seems to be that they communicate verbally with it—they must have been using it since before they developed telepathy."

"Could’t there have been direct contact between the Hirlaji and the Outsiders back when the Hirlaji were just evolving out of the beast stage?"

"There must have been," said Rynason. "The Temple rituals are conducted in an even older form of their language than most remembered—a proto-language that was kept alive only by the priest caste, because the machine had been set to respond to that language."

"But aren’t primitive languages usually composed of simple, basic words and concepts? How well could they communicate in such a language?"

"Not very well," Rynason said. "Which would explain why the machine seemed to make mistakes—clumsiness of language. So the Outsiders, maybe, left the machine when they pulled out, but they set it to respond to the Hirlaji language because our horsefaced friends were beginning to build a civilization of their own and the Outsiders thought they’d leave them some guidance. . . ." He stopped for a moment, remembering that first linkage with Horng, and Tebron’s memories. "The Hirlaji called them the Old Ones," he said.

"And that order to Tebron … about the other race that they would meet someday. That was based on Outsiders observations."

"I wonder when the Outsiders were on Earth," Rynason said. "Sometime after we’d started our own rise, certainly. Maybe in ancient Mesopotamia, or India. Or later, during the Renaissance?"

"The time doesn’t matter, does it?" Mara said. "They touched down on Earth, took note of us, and left. Somehow they thought we were going more rapidly than we did."

"Probably before the Dark Ages," Rynason said. "Maybe they didn’t see that thousand-year setback coming . . . ." He stopped, and stood up in the low passageway among the ancient circuitry. "So here we are, second-guessing the Outsiders. And outside, their proteges have disintegrators probably left by the Outsiders, and they’re just waiting for us to try to get out."

"Our new-found knowledge isn’t doing us much good, is it?" she said.

He shook his head slowly. "When I was still on the secondary senseteach units I met Rene Malhomme for the first time. My father worked the spacers, so I don’t even remember what planet this was on. But I remember the night I first saw Rene—he was speaking from the top of a blue-lumber pile, shouting about the corporations that were moving in. He was getting all worked up about something, and several people in the crowd were shouting back at him; I stopped to watch. All of a sudden six or seven men moved in from somewhere and dragged him down from where he was standing. There was a fight—people were thrown all around. I hid till it was over.

"When the crowd finally cleared, there was Rene. His clothes were torn, but he wasn’t hurt. Every one of the men who had attacked him had to be carried away; I think one of them was dead. Rene stood there laughing; then he saw me hidden in the darkness and he took me home. He told me that when he’d been younger he’d worked his way all the way in to Earth, and studied some of the cultures there. He’d learned karate, which was an ancient Japanese way of fighting."

Rynason took a deep breath. "He said everything a person learns will be useful someday. And I believed him."

"A nice parable," Mara said. "We could use him against the Hirlaji, though."

Rynason was silent, thinking. If they could only catch the aliens off guard . . . but of course they couldn’t, now. He let his eyes wander aimlessly along the circuitry surrounding them. Tell me, old Kor, what do we do now?

After a moment his eyes narrowed; he reached up and traced a connection with his fingers, back to the front,
toward the altar. It led directly to … the speaker!

The voice of Kor.

And if he could interrupt that connection, put his own voice through the speaker, out through the altar….

"Mara, we’re going out. I’ve found my own brand of karate for our friends out there."

He helped her to her feet. She moved somewhat painfully, her broken left arm hanging stiffly at her side, but she made no protest.

"We’ve got to be fast," he said. "I don’t know how well this will work—it depends on how much they trust their clay-footed god today." Quickly, he outlined his plan. Mara listened silently and nodded.

Then he set to work. It was largely guesswork, following those intricate alien connections, but Rynason had seen this part of such machines before. He found the penultimate point at which the impulses from the brain were translated into sound and broadcast through the speaker. He disconnected this, his torn fingers working awkwardly on the delicate linkages.

"Ready?"

Mara was just inside the narrow passage behind the altar. She nodded quickly.

Rynason twisted himself so that he could speak directly into the input of the speaker. He raised his voice to approximate the thin, high sounds of the Hirlaji language.

Remain motionless. Remain motionless. Remain motionless.

The command burst out upon the altar room of the Temple, shattering the silence. The Hirlaji turned in surprise to the altar—and stood still.

Remain motionless. Remain motionless.

It was the phrase he had heard the machine use so often to Tebron, king priest leader of all Hirlaji. It had meant something else then, but the proto-language of the Hirlaji had no precise meanings; given by itself, it seemed to mean precisely what it said.

"All right, let’s go out!" Rynason said, and the two of them broke from behind the altar. The Hirlaji stood completely still; several of those that Rynason had dropped with his stunner had recovered consciousness, but they made no move either. Rynason and the girl ran right through the quiet aliens; only a few of them turned shadowed eyes to look at them as they passed. They made the outside colonnade in safety, and paused there.

"They may see through this in a minute," Rynason said. "Don’t wait for me—get out of the city!"

"You’re not coming?"

"I won’t be too far behind. Get going!"

She hesitated only a moment, then hurried down the broad levels of the Temple steps. Rynason watched her to the bottom, then turned and re-entered the altar room.

Rynason went quickly among them, taking their weapons. Most of them made no effort to stop him, but a few tightened their grips on the disintegrators and he had to pry those thick fingers from the weapons, cursing to himself. How long would they wait?

There were fourteen of the disintegrators. They were large and heavy; he couldn’t hold them all at once. He dumped five of them outside the altar room and returned to disarm the rest of the aliens. Sweat formed beads on his forehead, but he moved without hesitation.

Another of the Hirlaji tightened his grip when Rynason began to take the weapon from him. He looked up, and saw the quiet eyes of Horng resting on him. The leathery grey wrinkles which surrounded those eyes quivered slightly, but otherwise he made no movement. Rynason dropped his gaze from that contact and wrested the weapon away.

As he started to move on to the next, Horng silently dipped his massive head to one side. Rynason felt a chill go down his back.

In a few more minutes he had disarmed them all. He set the last three disintegrators on the stone floor of the colonnade—and a movement in the distance caught his eye. It was on the south wall of the city; two men stood for a moment silhouetted against the Flat, then disappeared into the shadows. In a moment, another man appeared, and he too dropped inside the wall.

So Manning had already sent the men in. The mob was unleashed.

Rynason hesitated for a moment, then turned and went quickly back into the altar room. Mara’s radio was there; he lifted it by its strap and took it with him out to the colonnade.

He could see the Earthmen moving through the streets now, darting from wall to wall in the gathering darkness of evening. In a short time it would be full night—and Rynason knew that these men would like nothing better than to attack in the dark.

He warmed the radio and opened the transmitter.

"Manning, call off your dogs. I’ve disarmed the Hirlaji."
The radio spat static at him, and for several seconds he thought his signal hadn’t even been picked up. But at last there was a reply:

"Then get out of the Temple. It’s too late to stop this."
"Manning!"
"I said get clear. You’ve done all you can there."
"Damn it, there’s no need for any fighting!
Manning’s voice sounded cold even in the faint reception of the hand-radio. "That’s for me to decide. I’m running this show, remember."
"You’re running a massacre!" Rynason shouted.
"Call it what you like. Mara says they weren’t so docile when you broke in."

Rynason’s mind raced; he had to stall for time. If he could get Manning to stop those men until they cooled down…

"Manning, there’s no need for this! Didn’t she tell you that the altar is just a computer? These people hadn’t had anything to do with the Outsiders since before they can remember!"

The radio carried the faint sound of Manning’s chuckle. "So now they’re people to you, Lee? Or are you one of them now?"

"What the hell are you talking about?"
"Lee, my boy, you’re sounding like an old horsefaced nursemaid. You linked minds with them, and you say you were practically a Hirlaji yourself when you went into that linkage. Well, I’m not so sure you ever came out of it. You’re still one of them!"

"Is that the only reason you can think of that I might have for wanting to prevent a massacre?" Rynason said icily.

"If they tried to revolt once, they’ll try it again," Manning said. "Well crush them now."
"You think that will impress the Council? Slaughtering the only intelligent race we’ve found?"
"I’m not playing to the Council!" Manning snapped. "I’ve got these men following me, and I’ll listen to what they want!"

Rynason stared at the microphone for a moment. "Are you sure you aren’t afraid of your own mob?" he said.
"We’re coming in, Lee. Get out of there or we’ll cut you down too."
"Manning!"
"I’m switching off."
"Not quite yet. There’s one more thing, and you’d better hear this one!"
"Make it fast," Manning said. His voice sounded uninterested.
"If any of your boys try to come in, I’ll stop them myself. I’ve got the disintegrators, and I’ll use them."

There was silence from the radio, save for the static. It lasted for long seconds. Then:

"It’s your funeral." There was a faint click as Manning switched off.

Rynason stared angrily at the radioset for a moment, then left it lying at the top of the steps and went back inside. The Hirlaji stood motionlessly in dimness; it took awhile for Rynason’s eyes to adjust to it. He found the interpreter that Mara had left and quickly hooked it up to Horng. The alien’s eyes, moving heavily in their sockets, watched him as he connected the wires.

When everything was ready Rynason lifted the interpreter’s mike. "The Earthmen are going to attack you," he said. "I want to help you fight them off."

There was no reaction from the alien; only those quiet eyes resting on him like the shadows of the entire past.
"Can you still believe that Kor is a god? That’s only a machine—I spoke through it myself, minutes ago! Don’t you realize that?"

After a moment Horng’s eyes slowly closed and opened in acknowledgement. KOR WAS GOD KNOWLEDGE. THE OLD ONES DIED BEFORE TIME, AND PASSED INTO KOR. NOW KOR IS DEAD. 
"And all of you will be dead too!" Rynason said.

The huge alien sat unmoving. His eyes turned away from Rynason.
"You’ve got to fight them!" Rynason said.

But he could see that it was useless. Horng had made no reply, but Rynason knew what was in his thoughts now.

THERE IS NO PURPOSE.

TEN

Wearily, Rynason switched off the interpreter, leaving the wires still connected to the alien. He walked through the faintly echoing, dust-filled temple and stepped out onto the colonnade around it. It was almost dark now; the deep blue of the Hirlaji sky had turned almost black and the pinpoint lights of the stars broke through. The wind was
rising from the Flat; it caught his hair and whipped it roughly around his head. He looked up at the emerging stars, remembering the day when Horng had suddenly, inexplicably stood and walked to the base of a broken staircase. He had looked up those stairs, past where they had broken and fallen, past the shattered roof, to the sky. The Hirlaji had never reached the stars, but they might have. It had taken a god, or a jumbled legacy from an older, greater race, to forestall them. And now all they had was the dust and the wind.

Rynason could hear the rising moan of that wind gathering itself around him, building to a wailing planet-dirge among the columns of the Temple. And inside, the Hirlaji were dying. The knives and bludgeons of the Earth mob outside would only complete the job; the Hirlaji were too tired to live. They dreamed dimly under the shadowed foreheads … dreamed of the past. And sometimes, perhaps, of the stars.

Behind the altar, the huge and intricate mass of alien circuits glowed and clicked and pulsated … slowly; seemingly at random, but steadily. The brain must be self-perpetuating to have lasted this long … feeding its energy cells from some power-source Rynason could only guess at, and repairing its time-worn linkages when necessary. In its memory banks was stored the science of the race which had preceded even the ancient Hirlaji. The Outsiders had sprung up when this planet was young, had fought their way to the stars and galaxies, and eventually, when aeons of time pressed down, had pulled in their outposts and fallen back to this world. And they had died here, on this world, falling to dust which was ground under by the grey race which had followed them to dominance. "Before time," Horng had said; that must have meant before the Hirlaji had developed telepathy, before the period covered by the race-memory.

But the Outsiders were still here, alive in that huge alien brain … the science, the knowledge, the strange arts of a race which had conquered the stars while men still wondered about the magic of lightning and fire. A science was encapsuled here which could speak of war and curiosity as discontent, but could say nothing definite of contentment. An incomplete science? A merely alien science? Rynason didn’t know.

And the Hirlaji…. Twenty-six of their race remained, dreaming under heavy domes through which the stars shone at night and silhouetted the worn edges of broken stone. Twenty-six grey, hopeless beings who had not even been waiting. And the Earthmen had come.

For a moment Rynason wondered if the Hirlaji did not perhaps carry a message for the Earthmen too: that decadence was the price of peace, death the inevitable end of contentment. The Hirlaji had stilled themselves, back in the grey past … had taken their measure of quiet and contentment for thousands of years, the searching drives of their race dying within them. And this was their end.

THERE IS NO PURPOSE.

Rynason shook himself, and felt the cold wind cut through his clothing; it reawakened him. Stooping, he gathered up several of the disintegrators and brought them with him to the head of the massive stairs up which the attackers must come. He crouched beside those stairs, watching for movement below. But he couldn’t see anything.

Something about the Hirlaji still bothered him; kneeling in the gathering darkness he finally isolated it in his mind. It was their hopelessness, the numbness that had crept over them through the centuries. No purpose? But they had lived in peace for thousands of years. No, their death was not merely one of decadence … it was suffocation.

They had not chosen peace; it had been thrust upon them. The Hirlaji had been at the height of their power, their growth still gathering momentum … and they had to stifle it. The end in view didn’t really matter: it had not been what they would have chosen. And, having had peace forced upon them before they had been ready for it, they had been unable to enjoy it; and the stifling of scientific curiosity that had been necessary to complete the suppression of the war-instinct had left the Hirlaji with nothing.

But it had all been so unnecessary, Rynason thought. The ancient Outsiders brain, computing from insufficient evidence probably gathered during a brief touchdown on Earth, had undoubtedly been able to give only a tentative appraisal of the situation. But the proto-Hirlaji language was not constructed to accommodate if’s and maybe’s, and the judgments of the brain were taken as law by the Hirlaji.

Now the Earthmen for whom this race had deadened itself into near-extinction would complete the job … because the Hirlaji had learned their mistake far too late.

Rynason shook his head; there was a sickness in his stomach, a gnawing anger at the ways of history. It was capricious, cruel, senseless. It played jokes spanning millennia.

Suddenly there were sounds on the stairs below him. Rynason’s head jerked up and he saw five of the Earthmen climbing the stairs, moving as quickly as they could from level to level, crouching momentarily at each beneath the cover of the steps. He raised one of the disintegrators, feeling the rage building up within him.

There was a humming sound by his ear; the beam of one of the stunners passed by him, touching the rock wall. The wall vibrated at the touch, but the range was too great for the beam to have done it any damage. They were close enough, though to stun Rynason if they hit him.

He dropped flat, looking for the man who had fired. In a moment he found him: a small, lean man slipped
almost silently over the edge of one of the step-levels and rolled quickly to cover beneath the next. He had got further than Rynason had realized; only three levels separated them now. He could see, from this distance in the near-dark, the cruel lines of the man’s face. It was a harsh, dirty face, with wrinkles like seams; the man’s eyes were harsh slits. Rynason had seen too many faces like that here on the Edge; this was a man with a bitter hatred, looking for the chance to unleash it upon anyone who got in his way. And the enjoyment which Rynason saw gleaming in the man’s eyes chilled him momentarily.

In that moment the man leaped to the next level, sending off a beam which struck the wall two feet from Rynason; he felt the stinging vibration against his body as he lay flat. Slowly he sighted the disintegrator at the top of the level under which the man had crouched for cover, and waited for his next leap. Within him he felt only a bitter cold which matched the wind whipping above him.

Again the man moved—but he had crept to the side of the stairs before he leaped, and Rynason’s shot bit into the stone beside him as he rolled to safety. Now only one level separated them.

Further down the stairs, Rynason saw the others moving up behind the smaller man. Still more were moving out from the other buildings and darting to the stairs. But he had no time to hold them back.

There was silence, except for the wind.

And the man leaped, firing once, twice. The second beam took Rynason in the left wrist and spun him off-balance for a moment. But he was already firing in return, rolling to one side. His third shot took the man’s right shoulder off, and bit into his neck. The man staggered forward two steps, trying to raise his stunner again, but suddenly it clattered to the floor and he crumpled on top of it. A pool of blood spread around him.

Rynason moved back to the cover of the side wall, and watched for the other men. The first one had got too near; Rynason hadn’t realized how easily they could approach in this near-darkness. He felt the numbness of the stunnerbeam spreading nearly to his shoulder; his left arm was useless. Cursing, he trained the disintegrator along the line of the steps and fired.

The disintegrator cut through the stone as though it were putty, for a range of twenty feet. Rynason played the beam back and forth along the steps, cutting them down to a smooth ramp which the attackers would have to climb before they could get to him.

One of them tried to leap the last few levels before Rynason could cut them, but he sliced the man in two through the chest. The separate parts of the man’s body fell and rolled back to the untouched levels below. He had not had time to utter even a cry of pain.

For a time, now, there was complete silence in the wind. Rynason could see the inert legs of the last attacker projecting out over the edge of the third level down, and undoubtedly the others saw them too. They were hesitating now, unsure of themselves. Rynason stayed pressed to the stone floor, waiting. The wind whipped in a rising moan through the upper reaches of the building.

Another of the men slipped over the edge of the massive stairs, hugging the deeper darkness at the side of the stair-wall, and slowly inched his way up the newly-flattened ramp. Rynason watched him coldly, through a grey haze of fury which was yet tinged with despair. What use was all this, the killing, the blood and sweat and pain? It disgusted him—yet by its perverse senselessness it angered him too.

He cut a swathe through the crawling man, through head and neck and back. A gory shell-like hulk slide back to the foot of the ramp.

And abruptly the remaining men broke and ran. One of them rose and stumbled down the steep levels of the stairs, heedless of his exposure; with a shock, Rynason saw that it was Rene Malhomme. Another followed … and another. There were almost a dozen of them on the stairs; they all broke and ran. Rynason sent one beam after them, biting a depression into the rock wall beside them. Then they were gone.

Rynason moved back from the head of the stairs and leaned wearily against the stone. His left arm was beginning to tingle with returning circulation now; he rubbed it absently with his good hand and wondered if they would try the sheer walls on the other side of the Temple. He had scaled one of these ancient walls, but would they try it? Certainly they stood little chance coming up the stairs, unless they gathered for a concerted rush. And who would lead such a suicidal attack? These men were vicious, but they valued their lives too.

Yet he couldn’t watch the black walls. Leaving the stairway unguarded would be the most dangerous course of all.

In a few minutes the hand-radio, forgotten on the stone floor behind him, flashed an intermittent light which caught his eye in the dusk. That would be Manning.

"Lee, do you hear me?"
"I hear you." His voice was low and bitter.
"I'm coming in to talk. Hold your God damned fire."
"Why should I?" said Rynason,
"Because I'm bringing Mara with me. It's too bad you don't trust me, Lee, but if that's the way you want it I won't trust you either."
"That's a good idea," he said, and switched off.
Almost immediately he saw them come out from behind the cover of a fallen wall across the dusty street. Mara walked in front of Manning; her head was high, her face almost expressionless. The cold wind threw dust against their legs as they crossed the open space to the base of the steps.
Rynason stood motionless, watching them come up. Manning still had his two stunners, but they were in their holsters. He kept behind the girl all the way, pausing before pushing her up the open ramp at the top, then moving even more closely behind her. Rynason stood with the disintegrator hanging loosely in one hand at his side.
On the colonnade Manning gripped the girl by her undamaged arm. He nodded to one of the doorways into the temple, and Rynason preceded him inside.
As they entered Manning lit a handlight and set it on the floor. The room was thrown into stark relief, the shadows of the motionless aliens striking the walls and ceiling with an almost physical harshness. Manning paused a moment to look at the Hirlaji, and at the altar across the room.
"We can hear each other in here," he said at last.
"What do you want?" said Rynason. There was cool hatred in his voice, and the knife-scar on his forehead was a dark snake-line in the hard glare of the handlight.
Manning shrugged, a bit too quickly. He was nervous. "I want you out of here, Lee, and I'm not accepting any argument this time."
Rynason looked at Mara, standing helplessly in the older man's grip. He glanced down at the disintegrator in his hand.
Manning drew one of his stunners quickly, and trained it at Rynason's face. "I said no arguments. Put the weapon down, Lee."
Rynason couldn't risk a shot at the man, with Mara in front of him. He carefully laid the disintegrator on the floor.
"Slide it over here."
Rynason kicked it across the floor. Manning bent and picked it up, returned the stunner to its holster and held the disintegrator on him.
"That's better. Now we can avoid arguments—right, Lee? You've always like peaceful settlements, haven't you?"
Rynason glared at him, but didn't say anything. He walked slowly into the center of the room, among the Hirlaji. They paid no attention.
"Lee, he's going to kill them!" Mara burst out.
Rynason was standing now next to the interpreter. The handlight which Manning had set on the floor across the room was trained upwards, and the interpreter was still in the darkness. He lowered his head as if in thought and switched on the machine with his foot.
"Is that true, Manning? Are you going to kill them?" His voice was loud and it echoed from the walls.
"I can't trust them," Manning said, his voice automatically growing louder in response to Rynason's own. He stepped forward, pushing Mara in front of him. "They're not human, Lee—you keep forgetting that, for some reason. Think of it as clearing the area of hostile native animal life—that comes under the duties of a governor, now doesn't it?"
"And what about the men outside? Did you put it that way to them?"
"They do what I say!" Manning snapped. "They don't give a damn who they kill. There's going to be fighting here whether it's against the Hirlaji or between the townsman. As governor, I'd rather they took it all out on the horses here. Domestic tranquility, shall we say?" He was smiling now; he had everything in control.
"So that's your purpose?" Rynason said. There was anger in his voice, feigned or real—perhaps both. But his voice rose still higher. "Is butchery your only goal in life, Manning?"
Manning stepped toward him again, his eyes narrowing. "Butchery? It's better than no purpose at all, Lee! It'll get me off of these damned outworlds eventually, if I'm a good enough butcher. And I mean to be, Lee ... I mean to be."
Rynason turned his back on the man in contempt, and walked past Horng to the base of the ancient altar. He looked up at the Eye of Kor, dim now when not in use. He turned.
"Is it better, Manning?" he shouted. "Does it give you a right to live, while you slaughter the Hirlaji?"
Manning cursed under his breath, and took a quick step toward Rynason; his hard, black shadow leaped up the wall.
"Yes! It gives me any right I can take!"

It happened quickly. Manning was now beside the massive figure of the alien, Horng; in his anger he had loosened his grip on Mara. He raised the disintegrator toward Rynason.

And Horng’s huge fist smashed it from his hand.

Manning never knew what hit him. Before he had even realized that the disintegrator was gone Horng had him. One heavy hand circled his throat; the other gripped his shoulder. The alien lifted him viciously and broke him like a stick; Rynason could almost hear the man’s neck break, so final was that twist of the alien’s hands.

Horng lifted the lifeless body above his head and hurled it to the floor with such force that the man’s head was stoved in and his body lay twisted and motionless where it fell.

Afterwards there was silence in the room, save for the distant sound of the wind against the building outside. Horng stood looking down at the broken body at his feet, his expression as unfathomable as it had ever been. Mara stared in shocked silence at the alien.

Rynason walked slowly to the mike lying beside the interpreter. He raised it.

"You can move quickly, old leather, when there’s a reason for it," he said.

Horng turned his head to him and silently dipped it to one side.

Rynason lifted the broken form of Manning’s body and carried it out to the top of the steps leading down from the temple. Mara went with him, carrying the handlight; it fell harshly on Manning’s crushed features as Rynason waited atop the huge, steep stairway. The wind tore at his hair, whipping it wildly around his head … but Manning’s head was caked with blood. In a moment, the men from the town came out from cover; they stood at the base of the steps, indecisive.

They too were waiting for something.

Rynason hefted the body up over one shoulder and drew a disintegrator with the hand he had freed. Slowly, then, he descended the steps.

When he had neared the bottom the circle of men fell back. They were uneasy and sullen … but they had seen the power of the disintegrator, and now they saw Manning’s crushed body.

Rynason bent and dropped the body to the ground. He looked up coldly at the ring of faces and said, "One of the Hirlaji did that with his hands. That’s all—just his hands."

For a moment everyone was still … and then one of the men broke from the crowd, snarling, with a heavy knife in his hand. He stopped just outside the white circle of the handlight, the knife extended before him. Rynason raised the disintegrator and trained it on him, his face frozen into a cold mask.

"Enough!" he shouted. "Enough!" Angrily, he looked down at the crumpled form of Manning’s body. "Bury him!" he said.

There was still no movement from the men; Malhomme grabbed two of them roughly and shoved them out of the crowd. They hesitated, looking quickly from Malhomme to the disintegrator in Rynason’s hand, then bent to pick up the body.

"It’s a measure of man’s eternal mercy," said Malhomme acidly, "that at least we bury each other." He stared at the men in the mob, and the fury in his eyes broke them at last. Muttering, shrugging, shaking their heads, they dispersed, going off in two and threes to take cover from the wind-driven sand.

Malhomme turned to Rynason and Mara, his face relaxing at last. The hard lines around his mouth softened into a rueful smile as he put his arm around Rynason’s shoulder. "We can all take shelter in the buildings here for the night. You could use some rest, Lee Rynason—you look like hell. And maybe I can put a temporary splint on your arm, woman."

They found a nearby building where the roof had long ago fallen in, but the walls were still standing. While Malhomme ministered to Mara he did not stop talking for a moment; Rynason couldn’t tell whether he was trying to keep the girl’s mind off the pain or whether he was simply unwinding his emotions.

"You know, I’ve preached at these men for so many years I’ve got callouses in my throat. And one of these days maybe they’ll know what I’m talking about, so that I won’t have to shout." He shrugged. "Well, it would be a dull world, where I didn’t have a good excuse to shout. Sometimes you might ask your alien friends up there, Lee … what did they get out of choosing peace?"

"They didn’t choose it," said Rynason.

Malhomme grimaced. "I wonder if anybody, anywhere, ever will. Maybe the Outsiders did, but they’re not around to tell us about it. It’s an intriguing question to think about, if you don’t have anything to drink … what do
"you do, when there’s nothing more to fight against, or even for?"

He straightened up; the splint on Mara’s arm was set now. He settled her back in a drift of sand as comfortably as possible.

"I’ve got another question," Rynason said. "What were you doing among those men who came at me on the steps earlier?"

Malhomme’s face broke into a wide grin. "That was a suicidal rush on you, Lee. A damned stupid tactic … a rush like that is only as strong as the weakest coward in it. All it takes is one man to break and run, and everybody else will run too. So it was easy for me to break it up."

Rynason couldn’t help chuckling at that; and once he had started, the tension that had gripped him for the past several hours found release in a full, stomach-shaking laugh.

"Rene Malhomme," he gasped, "that’s the kind of leadership this planet needs!"

Mara smiled up from where she lay. "You know," she said, "now that Manning is dead they’ll have to find someone else to be governor."

"Don’t be ridiculous," said Malhomme.

CONTENTS

THE PEACEMAKER
By Alfred Coppel

We humans are a strange breed, unique in the Universe. Of all the races met among the stars, only homo sapiens thrives on deliberate self-delusion. Perhaps this is the secret of our greatness, for we are great. In power, if not in supernal wisdom.

Legends, I think, are our strength. If one day a man stands on the rim of the Galaxy and looks out across the gulfs toward the seetee suns of Andromeda, it will be legends that drove him there.

They are odd things, these legends, peopled with unreal creatures, magnificent heroes and despicable villains. We stand for no nonsense where our mythology is concerned. A man becoming part of our folklore becomes a fey, one-dimensional, shadow-image of reality.

Jaq Merril—the Jaq Merril of the history books—is such an image. History, folklore’s jade, has daubed Merril with the rouge of myth, and it does not become him.

The Peacemaker, the chronicles have named him, and that at least, is accurate in point of fact. But it was not through choice that he became the Peacemaker; and when his Peace descended over the worlds of space, Merril, the man, was finished. This I know, for I rode with him—his lieutenant in a dozen and more bloody fights that earned him his ironically pacific laurels.

* * * * *

It was in Yakki, down-canal from the Terran settlement at Canalopolis, that Merril’s plan was born. His ship,
the Arrow, stood on the red sands of Syrtis Major, waiting for a payload to the Outer System. It stood among a good
many like it: the Moonmaid, the Gay Lady, the Argonaut, and my own vessel, the Starhound.

We, the captains, had gathered in the Spaceman's Rest--a tinkling gin-mill peopled with human wrecks and
hungry-eyed, dusty-skinned women who had come out to Mars hoping for riches and had found only the same
squalor they had left behind. I remember the look in Merril's eyes as he spoke of the treasures of space that would
never be ours, of the gold and sapphires, the rubies and unearthly gems of fragile beauty and great price. All the
riches of the worlds of space, passing through our hands and into the vaults of the stay-at-homes who owned our
ships and our very lives. It seemed to me that Merril suffered as though from physical pain as he spoke of riches. He
was nothing if not rapacious. Greedy, venal, ruthless. All of that.

"Five of us," he said in a hard voice, "Captains all--with ships and men. We carry the riches of the universe and
let it slip through our fingers. What greater fools could there be?"

Oh, he was right enough. We had the power to command in our hands without the sense to grasp it firmly and
take what we chose.

"And mark you, my friends," Merril said, "A wall has been built around Mars. A wall that weakens rather than
strengthens. A wonderful, stupid, wall...." He laughed and glanced around the table at our faces, flushed with wine
and greed. "With all space full of walls," he said softly, "Who could unite against us?"

The question struck home. I thought of the five ships standing out there on the rusty desert across the silted
canal. Five tall ships--against the stars. We felt no kinship to those at home who clung to creature comforts while we
bucketed among the stars risking our lives and more. We, the spacemen, had become a race apart from that of the
home planet. And Merril saw this in our faces that night so long ago, and he knew that he had spoken our thoughts.

Thus was born the Compact.

Gods of space, but I must laugh when I read what history has recorded of the Compact.

"Merril, filled with the wonder of his great dream, spoke his mind to the Captains. He told them of the sorrow
in his heart for his divided fellow men, and his face grew stern when he urged them to put aside ideology and
prejudice and join with him in the Compact."

So speaks Quintus Bland, historian of the Age of Space. I imagine that I hear Merril's laughter even as I write.
Oh, we put aside ideology and prejudice, all right! That night in Yakki the five Captains clasped hands over the
formation of the first and only compact of space-piracy in history!

* * * * *

It was an all or nothing venture. Our crews were told nothing, but their pockets were emptied and their
pittances joined with ours. We loaded the five ships with supplies and thundered off into the cobalt Martian sky to
seek a stronghold. We found one readily enough. The chronicles do not record it accurately. They say that the fleet
of the Compact based itself on Eros. This is incorrect. We wanted no Base that would bring us so close to the home
planet every year. The asteroid we chose was nameless, and remained so. We spoke of it seldom as space, but it was
ever in our minds. There was no space wall, there to divide us one from the other. It was a fortress against the rest of
mankind, and in it we were brothers.

When we struck for the first time, it was not at a Russian missile post as the histories say. It was at the Queen
of Heaven, an undefended and unsuspecting merchantman. The records of Earth say the Queen was lost in space
between Uranus and Mars, and this is so. But she was listed lost only because no Russian or American patrol found
her gutted hulk. I imagine that at this very moment she hangs out beyond Pluto, rounding the bend of the long ellipse
we sent her on that day we stripped her bones.

She carried gold and precious stones--and more important yet, women being furloughed home after forced
labor in the mines of Soviet Umbriel. The Starhound and the Arrow bracketed her a million miles above the plane of
the ecliptic near Saturn's orbit, and killed her. We drew abreast of her and forced her valves. We boarded her and
took what we chose. Then we slaughtered her men and sent them on their long voyage. That was the beginning.

The attack against Corfu was our next move. This is the battle that Celia Witmar Day has described in verse.

Very bad verse.

"Corfu slumbered, gorged and proud-- While Arrow, Hound and Maid marshalled Freedom's might above the
tyrant's ground, And rained down death--"

There is much more, of course. Brave phrases of emotion and fanciful unreality written by one who never saw
the night of space agleam with stars.

There was no talk of tyranny or liberty aboard the Hound that day we leveled with the Maid and the Arrow a
thousand miles over the Russian Base of Corfu. There was talk of the bullion stored under the fortress' turrets.

Merril's face appeared in my visor screen, superimposed on the image of the grimy little asteroid floating
darkly against the starfields.

"Their radar has picked us up by now, and they're wondering who we are," he said, "Take the Hound out on
tangent left and join the Maid. Cover my attack and stand by to put a landing party aground."

I watched the image of the Arrow—a sliver of darkness against the crescent of Corfu—lancing down at the fortress. Her forward tubes were glowing with the familiar pre-discharge emanation.

Below us, confusion reigned. For the first time in memory an asteroid Base was under attack. Merril brought the Arrow in to within fifty miles and then unleashed the fury of his forward tubes. Hellfire coruscated over the steel turrets and stone walls of Corfu. It splashed like a liquid flame over men and metal and twisted the towers and buttresses into spidery tendrils of glowing thread. Corfu died without firing a shot.

We put a party from the Hound aground ten hours later. Even then, we had to wear insulated suits to walk in that still molten inferno. Charred bodies had become one with the stuff of the fortress, and nothing living was left within the keep. We looted Corfu’s treasure and lifted into space heavy with gold.

* * * * *

Time passed in an orgy of looting for the men of the Compact. We grew rich and arrogant, for in space we were kings. Torn by suspicion of one another, America and Russia could do nothing against us. They had built an Iron Curtain in space, and it kept them divided and weak.

Endymion felt our blasts, and Clio. Then came Tethys, Rhea, Iapetus. We cared nothing for the flag these Bases flew. They were the gathering points for all the gold and treasure of space and we of the Compact took what we wished of it, leaving a trail of blood and rapine behind us. No nation claimed our loyalty; space was our mother and lust our father.

Thus, the Peacemakers.

* * * * *

For five full years—the long years of the Outer Belt—the Arrow, the Starhound, the Moonmaid, the Lady and the Argonaut were the scourges of the spacelanes. No patrol could find us, and no defense could contain us. I recall how we laughed at the angry sputtering of Earth’s radio. Vast sums were spent in searches and new weapons to protect the meek and the mutually distrustful from Merril and the men of the Compact. Budgets, already strained to the breaking point by generations of the cold war, creaked and groaned as Russians and Americans spent furiously to build up their defenses against our depredations. But though we were few and they many—space was large and it hid us well.

And then one darkling day, Jaq Merril and I stood on the thin methane snow that carpeted our Base’s landing ramp, waiting under our own blue-black sky for the return of the Argonaut. Merril had sent her sunward to strike at the mines of Loki, an asteroid where Russian komisars rolled in mountains of blood-red rubies.

We waited through the day and into the sable night, but the Argonaut did not return. For the first time since the formation of the Compact, we had lost a ship, and something like unease crept into our hearts. The carousal that night had no gaiety, and there was the sound of bereaved women weeping.

Merril could learn nothing of the Argonaut’s fate. It was as though she had dropped through a hole in the fabric of space itself and vanished from the ken of men. To me he said: “I fear a new weapon.” But to the rest, he kept his peace and let the work of the Compact continue. There was nothing else to be done. Our Wall Decade was waning, and when a man or a Compact outlives the age that gave him or it birth, there is nothing to do but go forward and meet the new day dawning.

So it was with the Compact. We lived on as we had lived before: looting and killing and draining the wealth of space into our coffers. But in the back of our minds a shadow was lurking.

On the next raid, the Lady was lost. I saw it happen, as did Merril. There was nothing we could do to help her, and she died, spilling men into the void that ruptured in her last agony.

It was off Hyperion, whence we had come to loot the trove built there by the prospectors of the Saturnian Moons. And it was a trap.

The Arrow, the Hound and the Lady circled the moonlet, swinging inward to the attack. It was the Lady who was to put aground the raiding party, and her valves hung open while men readied the assault-boats. Our radar screens showed nothing of danger. There was only the bloated giant in the sky, a ringed monster of yellow gold against the starry velvet of space.

The Lady dropped her boats, the Hound and the Arrow hovering by to watch over their sister. And suddenly, the jagged moonscape below erupted—belching streaks of fire that sought us like probing fingers. I knew in one single instant of terror that this was the new weapon that had killed the Argonaut, for it sliced into the Lady’s flanks as though the steelite hull were cheese.

She bulged, glowing like an ember. There was a sudden nimbus of snow about her as her air escaped and froze, and then she rolled into her death-dance, open from bow to stern, spilling scorched corpses into the void.

The Arrow and the Hound drove off into space like furies leaving the spinning body of their sister ship behind, not waiting to watch her crash down onto the rocky face of Hyperion. And now the five of the Compact were only
three, and again there was the sound of weeping among our women.

Two months after that engagement, a single assault-boat returned to Base. It was the lone survivor of the Lady's landing party. By some miracle, the three men aboard had escaped the holocaust. They had landed and been captured and then they had fought their way free and into the void once more. They were half-dead from starvation and exposure, but they had brought word to Merril that the wall that had so long protected us was crumbling.

Merril sought me out, his lean hard face grim and set.
"There was a Russian among the Americans on Hyperion," he said.
"A prisoner?" It was my hope that spoke so, not my sure knowledge of what was to come.

Merril shook his head slowly. "A technician. They developed the beam that killed the Argonaut and the Lady--together." His voice was harsh and bleak. Then suddenly he laughed. "We've touched them," he said, "Touched them on their tender spot--their purses." He bowed low, filled with bitter mockery. "Behold the diplomats, the men who are accomplishing the impossible!"

And I knew that his words spelt doom. Doom for the Compact and for the Wall Decade that was our life. Yet we did not stint. In that year we raided Dione, Io, Ganymede, and even the American naval Base on Callisto. We gutted six Russian and four American rockets filled with treasure. And we ventured sunward as far as the moons of Mars.

We dared battles with patrol ships and won. We killed the destroyer Alexei Tolstoi off Europa and we shattered an American monitor over Syrtis itself, and watched the wreckage rain down on Yakki, the place where the Compact was born.

And we lost the Moonmaid.

The radio told us the story. Other new weapons were being developed against us, and here and there American and Russian spacecraft were seen in company for the first time in the history of the Age of Space. Convoys were formed from ships of both flags to protect spatial commerce from the imagined "great fleet" of the Compact. None knew that only the Arrow and the Starhound, small ships, weary ships, were left to face the slowly combining might of Earth.

And then at last, the pickings--growing slimmer always--diminished to the vanishing point. Merril stood before us and gave the assembled crews their option.

"The treasure hunt is over," our captain told us, "And those who wish may withdraw now. Take your women and the space-boats and return to Mars. You have your shares, and you can live in comfort wherever you may choose. If you wish it, go now."

Some few did go, but most remained. I watched Merril's face, and saw one last plan maturing there. Then he spoke again and we all understood. One last raid ... to take Luna and command the world!

"Still the unity of Mankind was not secure, and Merril, filled with impatience for his great dream, decided on one final stroke. He would descend on Luna Base itself with his fleet, and commanding all Earth, he would drive men together--even though it might mean his own death. With this plan of self-immolation in his heart, the Peacemaker ordered his hosts and sought the pumice soil of the mother planet's moon...."

This is the way Quintus Bland, historian and scholar, puts it down for posterity. I, one of "his hosts," would say it another way.

We had gutted the Solar System of its treasure and at last men were uniting against us. Our "fleet" was reduced to two small ships and a bare handful of men and women to fight them. Jaq Merril could see the handwriting on the wall and he knew that all must be gambled on one last throw of the dice. Only with Terra herself under our guns could we hope to continue sucking the juice of the worlds into our mouths. It was all or nothing, for we had grown used to our life and we could no longer change it to meet the demands of the dawning age of Soviet-American amity.

Side by side the Arrow and the Hound slanted sunward. Mars behind us, ahead lay the Earth-Moon system. Ten years had passed since any of us aboard the Compact ships had seen the home world, and though we no longer felt a part of it, the sight of the silvery cloud-flecked globe touched our hearts. Touched them as the sapphires of Mimas or the gold of Corfu touched them. We saw the planet that gave us birth and we were filled with hunger for it. To own it, command it, make it our own.

Luna's mountains were white and stark under our keels as Merril led us across the curve of the southern horizon, seeking to put us into position to attack the UN Moon Base in Clavius from the direction of the Moon's hidden face.
We swung low across unnamed mountain ranges and deep sheer valleys steeped in shadow. The voice of the ranger in the Arrow came softly through the open intercom into the tiny control room of the Hound. A woman's voice, tense with excitement, but disciplined and controlled.

"Range five hundred miles, four seventy five, four fifty--"

And then Merril's voice, calm and reassuring, giving heart to all the untried ones aboard with his steady conning commands.

"Four o'clock jet, easy, hold her. Drivers up one half standard. Steady goes. Meet her. Steady--"

Line astern now, the two ships flashing low across the jagged lunar landscape, and a world in the balance--An alarm bell ringing suddenly, and my screen showing the fleeting outline of a Russian monitor above, running across our stern. My own voice, sharp with command:

"Gun pointer!"

"Here, sir!"

"Get me that gunboat."

The Hound's turret wound about with agonizing slowness as the monitor reached for the sky, clawing for altitude and safety. And then there came a searing blast of fire and the fragments of the Russian gunboat raining down lazily, seeking their eternal rest in the pumice of Luna's hidden face.

But they had been warned at the UN Base. The monitor had left one dying shriek in the ether, and the waiting garrison had heard. Merril knew it, and so did I. We moved forward calmly, into the jaws of hell.

* * * * *

The Arrow attacked from ten o'clock, low on the horizon, the Hound from twelve o'clock high. We swept in over the batteries of pulsating projectors, raining down our bombs. The ground shuddered and shook with the fury of exploding uranium and the sky was laced with a net of fiery death. The Hound shrieked her protest as I swung her about for another attack.

There was a sickening swerve and the smell of ozone in my ship. Somewhere, deep within her, a woman screamed and I felt the deck under me give as one of the questing beams from the fortress below cut into the hull. Airtight doors slammed throughout the wounded vessel, and I drove her to the attack again, hard. The last of the bombs clattered out of the vents, sending mushrooms of pumice miles into the black sky. One battery of guns below fell silent.

The Arrow vanished into the night above and as suddenly reappeared, her forward tubes spewing red fire onto the Base below. Then Merril pulled her up again and disappeared among the pale stars.

The Hound's hurt was mortal, I could feel her dying under my hands, and tears streaked my face. Below decks, she was a shambles where the cutting beam from the ground had torn part of her heart out. Still I fought her. There was no retreat from this last raid, nor did I wish any. There was a madness in us--a blood-lust as hot and demanding as ever our lust for gold and treasure might have been.

I lashed the face of the fortress with the Hound's forward tubes, frantically, filled with a hateful anguish. I felt my ship losing way, twisting and seeking rest on the jagged ground below, and thinking he had deserted us, I cursed Merril in an ecstasy of blind fury.

Again and again the Hound was hit. I knew then that Merril's plan had been madness, a last gesture of defiance to the new age of unity among men. The Hound fell at last, spitting fire and gall in a futile dance of death.

She struck on a high plateau, grinding into the pumice, rolling with macabre abandon across the face of the high tableland. Then at last she was still, hissing and groaning fitfully as she died, her buccaneering days gone forever.

I donned a suit and staggered, half dazed, out into the lunar night. A half-dozen men and women from the crew had survived the impact and they stood by the wreckage, faces under the plastic helmets turned skyward. They were one and all stunned and bleeding from the violence of the Hound's end, but they looked neither back nor around them. Their eyes were filled with the insane glory of the drama being enacted in the sky.

The Arrow had returned. She lanced down out of the night like a spear of flame, vengeful and deadly. Straight into the mouth of the screaming guns she dove, death spilling from her tubes. She bathed the Moon Base in fire, searing the men within--Russian and American alike--into the brotherhood of death.

Miraculously, she pulled up out of her encircling net of flame. We watched in openmouthed wonder as she reached with sobbing heart for the sky just once again--and then, failing, crippled and dying, she hung above the crater's rim, framed with deadly beams from below, but radiant in her own right--gleaming in the light of the sun.

This was defeat. We knew it as we stood by the tangled pile of steelite that had been the Hound and watched the Arrow die. But nothing in this life that I have lived ever told me so grandly that the Wall Decade was ended--and our life of buccaneering with it--as the thing that happened next.

The Arrow's valve opened and a tiny figure stepped out--into space. I did not need to be told that Jaq Merril
was coming to meet the men he had welded together against him.

Lazily, unreal, the tiny shape twisted over and over as it fell, until at last it vanished amid the raw welter of craters and ridges beyond the razor wall of Clavius....

* * * * *

I have told a true tale, though one that will not be believed. I have taken the Peacemaker of the histories and painted him as he was.

But men are ashamed, and the chronicles of history must be rewritten to hide their weaknesses, Jaq Merril has become a legend, and the man that I knew is forgotten.

Merril—pirate, fighter, grandiose dreamer. That was my captain. Not the colorless do-good creature of the legend. Merril fought for lust and greed, and these are the things that will one day take men to the stars. He knew this truth, of course, and that was the substance of his great dream. Because of it, there are no longer walls in space, and the men who united to fight the Peacemaker will one day rule the universe.

Meanwhile, chroniclers will write lies about him, and Jaq Merril's laughter will echo in some ghostly Valhalla beyond the farthest star.

THE END
... and he who overcomes an enemy by fraud is as much to be praised as he who does so by force.

Machiavelli, DISCORSI, III, 1531

The captain walked down the ramp carrying a lightweight bag. To a discerning eye, that bag meant only one thing: Max Hunter had quit the service. A spaceman on leave never took personal belongings from his ship, because without a bag he could by-pass the tedious wait for a customs clearance.

"I always said, by the time I was twenty-six--"

"Lots of guys think they'll make it. I did once myself. Look at me now. I'm no good in the ships any more, so they bust me back to port hand. It's too damn easy to throw your credits away in the crumb-joints."

"I'm getting married," Hunter replied. "Ann and I worked this out when I joined the service. Now we have the capital to open her clinic--and ninety-six thousand credits, salted away in the Solar First National Fund."

"Every youngster starts out like you did, but something always happens. The girl doesn't wait, maybe. Or he gets to thinking he can pile up credits faster in the company casinos." The old man saluted. "So long, boy. It does my soul good to meet one guy who's getting out of this crazy space racket."

Max Hunter strode along the fenced causeway toward the low, pink-walled municipal building, shimmering in the desert sun. Behind him the repair docks and the launching tubes made a ragged silhouette against the sky.

Hunter felt no romantic inclination to look back. He had always been amused by the insipid, Tri-D space operas. To Hunter it had been a business--a job different from other occupations only because the risks were greater and the bonus scale higher.

Ann would be waiting in the lobby, as she always was when he came in from a flight. But today when they left the field, it would be for keeps. Anticipation made his memory of Ann Saymer suddenly vivid--the caress of her lips, the delicate scent of her hair, her quick smile and the pert upturn of her nose.

Captain Hunter thought of Ann as small and delicate, yet neither term was strictly applicable except subjectively in relation to himself. Hunter towered a good four inches above six feet. His shoulders were broad and powerful, his hips narrow, and his belly flat and hard. He moved with the co-ordination that had become second nature to him after a decade of frontier war. He was the typical spaceman, holding a First in his profession.

As was his privilege, he still wore his captain's uniform--dress boots of black plastic, tight-fitting trousers, and a scarlet jacket bearing the gold insignia of Consolidated Solar Industries.

Hunter entered the municipal building and joined the line of people moving slowly toward the customs booth. Anxiously he scanned the mass of faces in the lobby. Ann Saymer wasn't there.

He felt the keen, knife-edge disappointment, and something else--something he didn't want to put into words. He had sent Ann a micropic telling her when his ship would be in. Of course, there was that commission-job she had taken--

Abruptly he was face to face again with the vague fear that had nagged at his mind for nearly a month. This wasn't like Ann. Always before she had sent him every two or three days a chatty micropic, using the private code they had invented to cut the unit cost of words. But four weeks had now passed since he had last heard from her.

In an attempt at self-assurance, he recalled to mind just how exacting a commission-job could be. Perhaps Ann had been working so hard she had simply not had the time to send him a message.

Not even five minutes to send a micropic?

It didn't occur to him that she might be ill, for preventive medicine had long ago made physical disease a trivial factor in human affairs. A maladjustment then, with commitment to a city clinic? But Ann Saymer held a First in Psychiatry.

Hunter fingered the Saving Fund record in his pocket--the goal he and Ann had worked for so long. Nothing could go wrong now, nothing! He said the words over in his mind as he might have repeated the litany of a prayer, although Max Hunter did not consider himself a religious man.

At sixteen he and Ann Saymer had fallen in love, while they had both been in the last semester of the general school. They could have married then, or they might have registered for the less permanent companionship-union.
In either case, both of them would have had to go to work. Hunter could not have entered the space service, which enrolled only single men and Ann could not have afforded the university.

It hadn't mattered to Hunter. But Ann had possessed enough ambition for them both. She knew she had the ability to earn a First in Psychiatry, and would settle for nothing less. The drive that kept their goal alive was hers. She had determined to establish a clinic of her own. The plan she worked out was very practical—for Ann was in all respects the opposite of an idle dreamer.

Hunter was to join a commercial spacefleet. His bonus credits would accumulate to supply their capital, while he paid her university tuition from his current earnings. After they married, Hunter was to manage the finances of the clinic while Ann became the resident psychiatrist.

Even at sixteen Ann Saymer had very positive ideas about curing mental illness, which was the epidemic sickness of their world. Eight years later, while she was still serving her internship in a city clinic, Ann had invented the tiny machine which, with wry humor, she called an Exorciser.

She had never used the device in the public clinic. If she had, she would have lost the patent, since she had built the Exorciser while she was still serving out her educational apprenticeship in the city clinic.

"I'm no fool, Max," she told Hunter. "Why should I give it away? We'll coin credits in our own clinic with that little gadget."

Hunter had no objection to her aggressive selfishness. In fact, the term "selfishness" did not even occur to him. Ann was simply expressing the ethic of their society. He admired her brilliance, her cleverness; and he knew that her Exorciser, properly exploited, would be the touchstone to a fortune.

During one of his furloughs Ann demonstrated what the machine could do. After a minor surgical operation, a fragile filigree of microscopic platinum wires was planted in the cerebral cortex of a patient's skull. From a multidi- aled console Ann verbally transmitted a new personality directly into the maladjusted mind. After twenty minutes she removed the wire grid, and the disorganized personality was whole again, with an adjustment index testing at zero-zero.

"A cure that leaves out the long probe for psychic causes," she said enthusiastically. "In minutes, Max, we'll be able to do what now takes weeks or months. They'll swarm into our clinic."

Hunter reasoned that Ann had taken the commission-job in order to experiment with her machine in a privately-operated clinic. Her internship had ended a month before, and it had been an altogether legal thing for her to do. The fact that she had taken a commission meant she would work for only a specific contract period. And because a commission-job carried a professional classification, Ann had not been compelled to join the union.

Nevertheless the haze of anxiety still lay oppressively over Captain Hunter's mind. No matter what the requirements of Ann's commission may have been, she could have met him at the spaceport. She knew when his ship was due, and had never failed to show up before.

II

The line of people continued to move steadily toward the customs booth. Hunter stopped at last in front of a counter where a male clerk, wearing on his tunic the identification disc of his U.F.W. union local, typed out the customs forms, took Hunter's thumbprint, and carefully checked his medical certificate.

"You had your last boosters in the Mars station, is that correct?"

"Yes, last January," Hunter replied.

"That gives you an eight months' clearance." The clerk smiled. "Plenty of time for a spaceman's furlough."

"I'm making a permanent separation," Hunter affirmed.

The clerk glanced at him sharply. "Then I'd better issue a temporary health card." He ran a red-tinted, celluloid rectangle through a stamping machine and Hunter pressed his thumbprint upon the signature square. "Can you give me your home address, Captain?"

"I'll be staying at the Roost for a day or so. After that I'm getting married."

"I'll assign your health file to the Los Angeles Clinic then," the clerk said. "You can apply for an official reassignment later, if necessary."

He made a photo-copy of the health card, pushed it into a pneumatic tube and handed the original to Hunter. Then he rolled the customs forms back into the typewriter.

"Since you're quitting the service, Captain, I'll have to have additional information for the municipal file. Do you have union affiliation?"

"No. Spacemen aren't required to join the U.F.W."

"If you want to give me a part payment on the initiation fee, I'll be glad to issue--"

"I'll be a long, hard winter before Eric Young gets any of my credits," Hunter said, his eyes narrowing. Considering how Hunter felt about the Union of Free Workers and the labor czar, Eric Young, he thought he had phrased his answer with remarkable restraint.
"Anti-labor," the clerk said, and typed the designation on the form.

"No," Hunter snapped, "and I won't be labeled that. As far as the individual goes, I believe he has every right to organize. No one can stand up against the cartels in any other way. But this exploitation by Young--"

"You either join the U.F.W., or you're against us." The clerk shrugged disinterestedly. "It's all one and the same thing to me, Captain. However, if you expect a job in the city, you'll have to get it through the union." He typed again on the customs form. "According to a new regulation, I'm obliged to classify you as unemployed, and that restricts you to limited areas of Los Angeles as well as--"

"When the hell did they put over a law like that?"

"Two weeks ago, sir. It gives the clinics a closer control over the potentially maladjusted, and it should help ease the pressure--"

"There are no exceptions?"

"The executive classifications, naturally--professionals, and spacemen. That would have included you, Captain Hunter, but you say you've left the service."

Hunter gritted his teeth. It had been like this for as long as he could remember. Whenever he returned from a long flight there was always a new form of regimentation to adjust to. And always for the same reason--to stop the steadily rising incidence of psychotic maladjustment.

"How does the law define an executive?" Hunter asked.

"Job bracket with one of the cartels," the clerk replied. "Or the total credits held on deposit with a recognized fund."

The captain flung his savings book on the counter. The clerk glanced at the balance and X'ed out the last word he had typed on the customs form.

"You qualify, sir--with a thousand credits to spare. I'll give you a city-wide clearance as an executive. But I can only make it temporary. You'll have to check once each week with the U.F.W. office. If your balance drops below ninety-five thousand, you'll be reclassified."

The clerk ran another celluloid card--this time it was blue--through the stamping machine and passed it across to Hunter. Captain Hunter picked up his bag and entered the customs booth, which by that time was empty. The probe lights glowed from the walls and ceiling, efficiently X-raying his bag and his clothing for any prohibited imports. Within seconds the alarm bell clanged and the metal doors banged shut, imprisoning Hunter in the booth.

Now what? he asked himself. What regulation had he violated this time? In his mind he inventoried the contents of his bag. It contained only a handful of personal belongings, and the tools of trade which he had needed as a captain of a fighting ship. Everything was legitimate and above-board. Hunter hadn't even brought Ann a souvenir from the frontier.

* * * * *

After a time, the booth door swung open. A senior inspector, carrying a blaster, crowded into the cubicle.

"Open your bag!" The inspector commanded, motioning with his weapon.

Hunter saw that the blaster dial was set to fire the death charge, not the weaker dispersal charge which produced only an hour's paralysis.

Hunter thumbed the photocell lock. It responded to the individual pattern of his thumbprint, and the bag fell open. The inspector picked up the worn blaster which lay under Hunter's shipboard uniform.

"Smuggling firearms, Captain, is a violation of the city code. The fine is--"

"Smuggling?" Hunter exploded. "That blaster was registered to me nine years ago." He snapped open his wallet.

The inspector frowned over the registration form, biting indecisively at his lower lip.

"That was issued before my time," he alibied. "I'll have to check the regulations. It may take a while."

He left the booth. He was gone for a quarter of an hour. When he returned, both metal doors snapped open.

"Your permit is valid, Captain Hunter," the inspector admitted. "Unrestricted registrations like yours have not been issued for the past five years. That's why the probe was not adjusted to the special conditions which apply in your case. Your permit is revocable if you are committed for maladjustment."

Hunter grinned. "I wouldn't count on that. My adjustment index is zero-zero."

"A paragon, Captain." The voice was dry and biting. "But you may find conditions on the Earth a little trying. You haven't had a chance to get really well-acquainted with your own world since you were a kid of sixteen."

Hunter's customs clearance had taken more than an hour. Before he left the municipal building, he made a quick tour of the lobby, searching again for Ann Saymer. Satisfied that she had not come, he put in a call from a public tele-booth to Ann's apartment residence. After a moment, Mrs. Ames' face came into sharp focus on the screen, the light coalescing about her hair.

A warm, motherly widow of nearly eighty, Mrs. Ames had been the residence's owner for a decade, and had
taken a great deal of vicarious pleasure in Ann's romance with the captain. "It's so different," she said once to Hunter, "your faith in each other, the way you work together for a goal you both want. If the rest of us could only learn to have some honest affection for each other. But, there, I'm an old woman, living too much in the past."

As soon as Hunter saw her face on the screen, he knew that something was wrong. She was tense and nervous, tied in the emotional knots of an anxiety neurosis. And Mrs. Ames was not the woman to fall easy victim to mental illness. If Hunter had been guessing the odds, he would have put her adjustment index on a par with his own.

"I haven't seen Ann for a month," she told him.
"Where is she? My last micropic from her said something about a commission-job--"
"She's all right, Max. Did you join the U.F.W.?"
"I'll be damned if I will."

Why had she asked him that? Her question seemed totally unrelated to her reassurance as to Ann--another clear symptom of her emotional unbalance.

"About Ann, Mrs. Ames," he persisted. "Do you know what clinic gave her the commission?"
Mrs. Ames stared at him in surprise. "Ann didn't tell you in her micropic?"
"We use a personal code," he explained. "That makes a certain type of communication extremely difficult."
"I didn't see her, Max. After she took the commission some men came for her things. They brought me a note from Ann, but it didn't tell me where she was. It just authorized the men to move out her belongings."
"Is the work outside of Los Angeles? Do you know that much?"
"At first I guessed--" She broke off, biting her lip, and her face twisted in an agony of intense feeling. "No, Max, an old woman's guesses won't help. I can't tell you any more about it."
"I'll come out and see you this afternoon, Mrs. Ames," he promised, "after I check in at the Roost. I want to look at that note you had from Ann."

III

Captain Hunter left the municipal building and stood on the transit platform. It was blazing hot in the noon sun, and he considered chartering an autojet to the city, as he always had before. But though a jet was faster than the monorail it was also more expensive. Acutely mindful that he had left the service and would earn no more juicy credit bonuses, he took the monorail instead.

He had only a ten-minute wait before a crowded car screamed to a stop at the port station. Hunter went aboard, along with four passengers from recent inbound flights--laboring class tourists returning from vacations on one of the planetoid resorts. Since a majority of the people who passed through the spaceport were executives or professionals, they used the autojets.

Hunter's uniform set him apart. A spaceman was expected to live high, to throw away credits like the glamor heroes on the Tri-D space dramas.

The monorail car was crowded, primarily with afternoon-shift workers on their way to the industrial area. They all wore on their tunics the discs of the Union of Free Workers. The four tourists who went aboard at the spaceport with Hunter pulled out their U.F.W. badges and pinned them on. They belonged. Hunter didn't.

He found an empty chair at the rear of the car, beside a gaudily attired woman, whose union disc proclaimed her a member of Local 47, the Recreational Companion Union. What miracles we perform, Hunter thought, with a judicial selection of innocuous words!

He glanced at the woman. She was past the first bloom of youth and her face, under her makeup, was heavily lined, her eyes shrewd and observing. Had he known that she had been shadowing him almost from the instant of his arrival in Los Angeles, and had been awaiting his return to Earth in obedience to carefully formulated instructions he would not have regarded her so complacently.

The monorail shot up toward the Palms-Pine pass of the San Jacinto Mountains. From the crest of the grade Hunter could look back at the flat, cemented field of the spaceport and the ragged teeth of the launching tubes rearing high on the Mojave. Ahead of him, misted by the blue haze of industrial smog, was Los Angeles, the capital city of Sector West--and indirectly the capital of the entire planet.

Almost indistinct against the horizon were the soaring, Babel towers, the tangled network of walk-levels, jet-ways and private landing flats, which was the center-city. The lower, bulky factory buildings squatted under the towers and spreading outward from them, like concentric rings made by a stone hurled into a quiet pool, was the monotonous clutter of the minimum-housing.

The city sprawled from San Diego to Santa Barbara, and it lapped against the arid Mojave to the east. Beyond were the suburban homes of laborers and low-echelon executives who had carved brass-knuckled niches for themselves in the medium-income bracket.

Hunter saw the panoramic view of Sector West for only a split-second before the monorail car screamed down through the layer of gray haze. For thirty minutes the car shot across the minimum-housing area, stopping from time
to time at high-platformed stations.

In the industrial district the car emptied rapidly. Only Hunter and his faded seat companion got out at the
turnaround terminal and took the slideway to center-city. In the metro-entry at the top of the stairs they went through
a security check station manned by six blaster-armed police guards.

Half of the guards wore the insignia of Consolidated Solar Industries and half of United Research, the two titan
cartels which were locked in deadly battle for the empire beyond the stars.

The government played it safe, Hunter thought with bitterness, using an equal number of police from each
organization. On Earth the pacific balance of commercial power was never disturbed—not, at least, on the surface.
The two imperial giants lived side by side in a tactful display of peace.

On the frontier the real conflict raged, fought with all the weapons of treachery and an arsenal of highly refined
atomic weapons—the blaster which could tear a man into component elements, and the L-bombs that were capable of
turning a young sun into a nova.

The woman passed through the security check with no trouble. The men knew her and made only a perfunctory
examination of her cards. But Hunter again had difficulty because of the blaster in his bag. His registered permit
carried no weight with the guards. It was not their duty to execute existing law, but to protect their private
employers.

However, the Consolidated insignia on Hunter's jacket made the three Consolidated guards ready to honor his
permit. Eventually they persuaded the opposition to pass Hunter into the city, on the ground that the captain's zero-
zero adjustment index indicated that it was safe for him to carry arms.

When Hunter went through the probe, he found the woman waiting for him. During the half-hour ride from the
spaceport, he had tried twice to start a conversation with her, and failed. Now, abruptly, her face was animated with
interest. She put her arm through his and walked with him to the lift shaft.

"So you got away with it, Captain." Since it was long-standing fashion, she had trained her voice to sound low-
pitched and husky. "I mean, bringing a blaster into center-city."

"Why all this fuss about a gun?" Hunter asked.

"It's a new government regulation," she told him.

"The government doesn't make the law," he reminded her. "The cartels do."

"The last fiscal mental health report showed the percentage of maladjusted--" She laughed throatily. "I wish
we'd use words honestly! The survey showed the lunatic percentage is still increasing. The cartels are using that
report as an excuse to keep the people unarmed."

Hunter was regarding her steadily. "Why?" he asked.

"We're not as content with our world as we're supposed to be," she said. "Eric Young can't keep all of us in line
forever. Captain, we could use your blaster. It's next to impossible to get one these days. I could make it worth your
while--"

"It's registered to me," Hunter pointed out.

"I'll change the serial," was her instant reply. "Your name wouldn't be involved."

"No, I want to keep it."

"To use yourself?"

"Don't talk nonsense," he said. "This isn't the frontier."

He made the denial vehemently, but deep in his mind he had an uncertain feeling that her guess was right. Earth
was not the battle-ground, but it had spawned the conflict. The appearance of peace was a sham. Here the battle was
fought with more subtlety, but the objective remained the same.

If Ann Saymer had somehow been caught in the no-man's-land between the two cartels—It was the first time
that thought had occurred to Hunter, and it filled him with a dread foreboding.

The woman sensed his feeling. He saw a smile on her curving lips. She said softly, "So even a spaceman
sometimes has his doubts."

"I left the service this morning," he said. Suddenly he was telling her all about himself and Ann. It was unwise,
perhaps even dangerous. But he had to unburden himself to someone or run the risk of losing his emotional control.

"So now you've lost this—this ambitious woman of yours," she said when he had finished.

"No," he protested. "I won't let myself believe that. Once I did--"

"As well as her interesting invention—the Exorciser," she went on relentlessly. "Have you ever wondered,
Captain Hunter, what might happen if the platinum grid was not removed from a patient's brain?"

"No, but I suppose—I suppose he'd remain in control of the operator of the transmitter."

She nodded. "He'd become a perfectly adjusted specimen with a zero-zero index, but—he'd also become a
human robot with no will of his own."

"But Ann wouldn't--"
"Not Ann, Captain. Not the girl you've waited so long to marry. All she wants is a clinic of her own so that she can help the maladjusted. But don't forget--she holds a priceless patent. Keep your blaster, my friend. I've an idea you may need it."

He gripped her wrist. "You know something about this?"
"I know the world we live in--nothing more."
"But you're guessing--"
"Later, Captain, after you start putting some facts together on your own." She pulled away from him. "If you want to find me again--and I think you will--look for me in Number thirty-four on the amusement level. Ask for Dawn."

Suddenly, for no reason that he could explain, he had for her a great sympathy. She was no ordinary woman. Her discernment was extraordinary, and she possessed, in addition, a strangely elusive charm.

They rode the lift as it moved up through the city level in its transparent, fairy-world shaft. Dawn got out first, at the mid-city walk-way where the cheapest shops and the gaudiest entertainment houses were crammed together. Dazzling in the glare of colored lights, the mid-city never slept. It was always thronged. It was the only area of the heartland--except for the top level casinos--open to every citizen without restriction.

On the levels immediately above it were the specialty shops, dealing in luxuries for the suburbanites who had fought, schemed and bribed their way out of the minimum housing. Higher still was the sector given over to the less expensive commercial hotels.

The upper levels were occupied by cartel executive offices and at the top, high enough to escape the smog and feel the warmth of the sun, were the fabulous casino resorts, the mansions built by the family dynasts who controlled the cartels, and the modest, limestone building housing the mockery which passed as government.

IV

Captain Hunter left the lift at Level Nineteen. An automatic entry probe accepted his blue-tinted executive card, and he walked the short distance to the hotel which specialized in catering to spacemen. It was traditionally neutral ground, where the mercenaries of Consolidated or United Research met as friends, although a week before they might have been firing radiation fire at each other in the outer reaches of space. The frontier conflict was a business to the spaceman. Hunter was too well-adjusted to become emotionally involved in it himself.

The spacemen called their hotel the Roost, a contraction lifted from the public micropic code. The full name was the Roosevelt, lettered on the entry. The hotel was popularly supposed to have been built close to the site of a twentieth century Los Angeles hotel of the same name, destroyed in the last convulsive war that had shattered the earth.

By micropic Hunter had made his customary reservation. His room was high in an upper floor overlooking Level Twenty-three. Through the visipanel he could see the walk-ways thronged by the various classifications of executives who worked in the central offices of the cartels--lawyers, engineers, administrators, directors, astrogeographers, designers, statisticians, researchers.

Somewhere in the crowd, perhaps, were the two men who ruled the cartels and directed the struggle for the Galactic empire. Glenn Farren of Consolidated Solar and Werner von Rausch of United Researchers. Max Hunter had never seen either of the men or any of their dynastic families. He knew little about them. Their pictures were never published.

Yet Farren and Von Rausch held in their hands more despotic power, more real wealth and military might, than any ancient Khan or Caesar had ever dreamed of.

Did they now want Ann Saymer's patent? The answer, Hunter realized, was obvious. With Ann's Exorciser, they could enslave the centers of civilization as they had enslaved the frontier. In itself that was a minor factor, already accomplished by man's acceptance of the jungle ethics of the cartels. Far more important, if one of the cartels controlled the patent, it had a weapon that would ultimately destroy the other.

With trembling fingers, Hunter took Ann's last micropic from his bag and rolled the tiny film into a wall-scanner. He could have recited it by heart; yet, by reading it again, he somehow expected to extract a new meaning. The code he and Ann used, contrived for economy rather than secrecy, was merely a telescoping of common phrases into single word symbols.

IHTKN, at the beginning, was easily interpreted as "I have taken," and COMJB became "commission-job." The micropic transmission monopoly arbitrarily limited all code words to five letters or less, counting additional letters as whole words. But because of the simplicity of the technique, some of Ann's symbols were open to a number of interpretations.

Hunter was sure of one thing. Ann had not specifically named the clinic where she was working. She said she had gone to work for the biggest--or possibly the symbol meant best--of the private clinics. Either term could apply to the clinics run by the two cartels; or, for that matter, to the largest of them all, operated by Eric Young's union.
But Ann, having invented the Exorciser, would know all its possible misuses—a factor which had not occurred to Hunter until Dawn spelled it out for him. Would Ann, then, have been fool enough to let herself fall into the hands of the cartels?

That line of reasoning gave Hunter new hope. If one of the cartels tried to trap her, Ann would simply go into hiding. It would complicate the problem of finding her, but at least he could assure himself she was safe. Ann had brains to match her ambition. She couldn't otherwise have earned a First in Psychiatry. No, Hunter was certain the cartels didn't have her.

The telescreen buzzer gave a plaintive bleep. Hunter jerked down the response toggle. Surprisingly, the screen remained dark, but Hunter heard a man's voice say clearly, "You are anxious to find Ann Saymer, Captain Hunter?"

"Who is this?" Hunter asked, his mouth suddenly dry.

"A friend. We have your interest at heart, Captain. We suggest that you investigate United Researchers' clinic when you start looking for Miss Saymer."

The contact snapped off. Hunter sat down slowly, his mind reeling. Since only his screen had been neutralized, the machine was not at fault. Only a top-ranking cartel executive could arrange for a deliberate interruption of service. The rest followed logically. No one in United would have given him the information.

So Ann had fallen into their hands after all! Someone in Consolidated—perhaps Glenn Farren himself—was setting him on Ann's trail, on the chance that Hunter could find her when Consolidated's operatives had failed.

Hunter was used to the risk of long odds. He had a ten-year apprenticeship in the treachery and in-fighting of the frontier. There was a good chance that he could play one cartel against the other, and in the process get Ann away from both of them.

One more thing he wanted before he planned his opening attack against United Researchers—the note Ann had sent to Mrs. Ames. It might give him a clue as to where United had taken her. Hunter wasn't naive enough to suppose they had kept her in center-city. But perhaps she was not even in Sector West.

* * * * *

Each of the eleven sectors into which the Earth was divided was controlled by one of the two cartels, as an agricultural or industrial appendage of the western metropolis. It was a paternal relationship, although no comparable city had been permitted to develop and company mercenaries policed the sectors.

Children who exhibited any spark of initiative or ability were skimmed off from the hinterland to Sector West and thrown into the competitive struggle of the general school. If they fought to the top there, they were integrated as adults into the hierarchy of the cartels.

The rest became the labor force of Sector West, enrolled in Eric Young's union and crowded into the minimum housing. The teeming millions left in the hinterland were a plodding, uninspired mass content with trivialities. They felt neither ambition nor frustration. While the number of the mentally ill continued to multiply in Sector West, only a fraction of the hinterland population suffered the mental decay.

Hunter fervently hoped United had taken Ann to one of the other sectors. Rescue would be easy. An experienced spaceman could out-talk, out-maneuver, and out-fight an entire hinterland battalion.

Max Hunter took an autojet from the Roost to Mrs. Ames' residential apartment. Conservation of his capital no longer counted, but time did. If United had Ann's patent, Ann herself was expendable. Hunter had to make his move to save her before they knew what he was up to. It would be a difficult deal to pull off in the capital city, where operatives of both cartels swarmed everywhere.

He left his blaster in his hotel room, to avoid an interrogation at any other metro-entry. Mrs. Ames' apartment residence was one place in the city where he had no need to go armed.

Just outside center-city a single street of twentieth century houses, sheltered by the Palos Verdes Hills, had survived the devastation of the last war. In the beginning the street had been preserved as a museum piece while the cartel city had grown up around it. But with each passing generation, popular interest had waned. Eventually the houses had been sold.

One was now operated by a religious cult. Two were enormously profitable party houses, where clients masqueraded in the amusing twentieth century costumes and passed a few short hours living with the quaint inconveniences of the past. The game had become so attractive that reservations were booked months in advance. The fourth relic remained unsold, slowly falling into ruin. The fifth belonged to Mrs. Ames.

To satisfy a whim—originally it was no more than that, Mrs. Ames had assured Hunter many times—she had asked her husband to buy it for her some fifty years ago. After a space-liner accident left her a widow at thirty-five, she had moved into the house as a means of psychologically withdrawing from her grief.

She never left it again. She found the old house an island in time, a magic escape from the chaos of her world.

She took in four residents because she needed their credits to augment the income from her husband's estate,
and the house was then officially listed as an apartment. Chance worked her a miracle—or perhaps the house did possess a magic of its own—for the residents were as charmed by its inconveniences as Mrs. Ames had been. Ann wouldn't consider living anywhere else, although the house was more than a mile from her university. Even Hunter felt the indefinable spell, when he was in from a flight and went to see Ann.

It was a house that invited relaxation. It was a house where time seemed to be stated in a value that could not be measured with credits. It was a house that whispered, "I saw one world fall into dust; yours is no more eternal"—and, for a moment, that whisper made the cartel-jungle meaningless.

V

Hunter left his autojet on the parking flat behind the house. He fed enough coins in the meter to hold the car for twenty-four hours. He didn't know how fast he'd want an autojet after he talked to Mrs. Ames, but he didn't want a chance passer-by to pick up his car if the charter expired.

It was necessary for him to ring a bell manually, by means of a metal button fixed to the wooden frame of the front door. No scanner announced his arrival, nor did any soundless auto-door respond to a beam transmitted from within the house. After a time Hunter heard footsteps. A strange woman—probably a new resident who had taken Ann's place—opened the door.

"I'm Captain Hunter," he said. "I came to see Mrs. Ames."

"Won't you come in, Captain?" the woman replied.

She led him into a front room which, Ann had once told him, had been called a living room. A peculiar name, surely, for the room appeared to have been designed solely as a place to sit while watching Tri-D—or flat-screen television, as it had been called in its early developmental stage when the house was new—or to hear someone play the bulky instrument known as a piano.

The room was an example of the appalling waste of space so common to the twentieth century. It was extremely spacious, but neither food tubes nor bed drawers were concealed in the walls.

Hunter had always been curious about the piano. It amazed him that it had been operated entirely by hand. There was no electric scanner to read the mood of the player and interpret it in melody. Driven to contrive his own harmonics, how could the twentieth century man have derived any satisfaction at all from music? His sensibilities had been immature, of course. But even so, an instrument which demanded so much individual creativeness must have been an enormous frustration.

Since so many surviving twentieth century machines made the same demand on the individual—their automobiles, for example, had been individually directed, without any sort of electronic safety control—it had puzzled both Hunter and Ann that the incidence of maladjustment in the past had been so low.

The captain dropped into a comfortable, chintz-covered rocking chair—one relic in this island of time that he really enjoyed. "Will you tell Mrs. Ames I'm here?" he asked the stranger.

"I'm Mrs. Ames."

"I mean Mrs. Janice Ames—the owner of the house."

The woman smiled woodenly. "You're speaking to her, Captain, though I must say I don't remember ever having met you before."

"You don't remember—"

Fear clutched at his heart. He sprang up, moving toward her with clenched fists. "An hour ago I called Mrs. Ames from the spaceport. I saw her. Here—in this room."

"I've owned this house all my life, Captain." Her expression was more than good acting. She spoke with utter conviction, and seemed completely sure of herself. "You must be—" She hesitated and looked at him sharply. "Have you checked your adjustment index recently?"

"I haven't lost my mind, if that's what you're getting at," he said. "Where's Ann Saymer?"

"Believe me, please. The name is totally unfamiliar to me." The woman was painfully sympathetic—and frankly scared. She backed away from him. "You need help from the clinic, Captain. Will you let me call them for you?"

Suddenly the light fell full on her face, and Hunter saw the tiny, still-unhealed scalpel wounds on both sides of her skull. The light glowed on the microscopic filament of platinum wire clumsily left projecting through the incision.

He understood, then. This woman was wearing one of Ann's patented grids, sealed into her cerebral cortex. It made her into a robot, responding with unquestioning obedience to the direction of Ann's transmitter. And Hunter had no doubt that United manipulated the transmission.

Simultaneously he realized something else. If the cartel went to this extreme to forestall his search for Ann, she must still be alive. For some reason they still needed her. Possibly her patent drawings had been submitted for government registry in such a way that only Ann understood them.

Ann had been through the general school, and knew what the score was. She would have protected her
invention--and incidentally insured her own survival--if she could have possibly done so, even at a fearful risk to herself.

Hunter swung toward the door. It did not occur to him to call the police, since they were all cartel mercenaries. Whatever he did to help Ann, he would have to do on his own. Until he found her, he could count on help from Consolidated. After that--nothing.

He jerked open the front door--and froze. Three men were waiting on the porch with drawn blasters. Hunter had no time to recognize facial features which it might have been to his advantage to remember later, no time to find any identifying insignia on their tunics. With a barely visible flickering fire arced from one of the weapons, and pain exploded in his body, unconsciousness washed into his brain.

His first sensation when the paralysis began to wear off was the dull ache of visceral nausea. He opened his eyes, and saw, bleakly shadowed, the living room of the Ames house. It was after dark, which could only mean that he had lain there nearly four hours. To knock him out for that period of time, they must have given him a nearly lethal charge from the blaster calculated just under the limit of physical endurance.

His motor control and his sense of touch returned more slowly. For a quarter of an hour he lay helpless in the chintz-covered rocker, feeling nothing but a tingling, like pin-pricks of fire, in his arms and legs.

He looked down and saw that he held a blaster in his hand--his own blaster, which he had left in his room in the Roost. He did not yet have the neural control to release his fingers from the firing dial.

As his sense of hearing was restored, he became aware that the Tri D had been left on. The screen pictured the swirling confusion of a mob. An announcer was describing the sudden outburst of labor violence which had occurred in the industrial district that afternoon. Eric Young's U.F.W. had gone on strike against a dozen separate plants.

Essential plants, naturally. Everything was always essential, and government spokesmen always made pretty speeches deploring the situation. It was a pattern familiar to Hunter for years. One of the cartels would pay Young to strike factories belonging to the other. Then a second bribe, paid by the struck cartel, bought off the strike. Occasionally a sop of bonus credits had to be dished out to the faithful.

It was not a maneuver either Consolidated or United used frequently, because the advantage was transitory, and the only long-term winner was Eric Young.

This time there was a slight variation in the formula. Young had struck plants of both cartels. That puzzled Hunter, but any curiosity he felt was subordinate to his disgust. How much longer would this farce go on before it dawned on the rank and file of the U.F.W. that Eric Young was playing them all for suckers? Hunter tried to get up to snap off the telecast. He managed only to throw himself awkwardly over the arm of the chair.

And then he saw the body on the floor--the body of the genuine Mrs. Ames, charred by a ragged blaster wound seared through her breast. They had murdered her--naturally with his blaster--and left him at the scene, neatly framed for the crime.

Hunter heard--right on cue--the whine of a police siren outside. Everything timed to trap him just as the motor paralysis wore off! With an effort that brought beads of sweat to his forehead, he dropped his blaster and pushed himself out of the chair. His feet were numb. He moved a few steps and banged into the piano. Clawing for support, his hands crashed in jangling discord on the keys.

The siren swelled loud in front of the house. Hunter heard the drum-beat of boots on the porch. He stumbled toward the kitchen--and fell into the arms of two police officers who had entered from the rear of the house.

He swung his fist; the fingers felt like clods of wet clay. One of the mercenaries caught his wrist and held it easily. In the gloom Hunter saw the Consolidated insignia on the man's jacket, and the guard whispered quickly, "This deal was a set-up, Hunter--packaged evidence, dropped at headquarters ten minutes ago."

Hunter stared. "Accusing me by name? Get this straight! Four hours ago they put me under with a blaster and--"

"It's a United frame," the guard said. "They want you out for good. The top brass of Consolidated is giving you the green right down the line. The fastest out Jake and I could figure--" He jerked his head toward his companion. "--was to give the United boys on our team the front of the house, and let you make a break for it from the back. We'll fake enough here to protect ourselves."

They pushed a blaster into Hunter's hands. He stumbled through the kitchen as the front door gave and two United mercenaries burst into the house. Hunter ran awkwardly, without full control of his legs.

He saw, looming black against the night shadows, the oval silhouette of the autojet on the Ames flat, still held under his twenty-four hour charter. It offered a tempting means of escape, but a public car was too easily traced and brought down by police tracers. However, it could perform a miracle as a diversion.

VI

Hunter slid into the car, punched out a destination blindly, and engaged the flight gear. With the customary roar
of power, the car shot up from the flat. Hunter leaped free. His feet struck the cement. The lingering trace of paralysis, destroying his normal co-ordination, made the fall very painful.

Hunter flung himself flat in the shadow of the ornamental shrubs along the edge of the parking flat. The four police mercenaries sprinted out of the house and leaped into the police jet. With sirens screaming, it soared up in pursuit of the empty autojet.

Hunter estimated that he had perhaps thirty minutes before they sent out a general alarm. A painfully small margin of safety. Where could he hide that the machines of detection--the skilled, emotionless, one-track, electronic brains--would not eventually find him? And what of Ann Saymer? What could he do as a fugitive to save her?

United had planned it all down to the smallest detail. But that was the way the cartels operated. It was the system Hunter was accustomed to. He felt neither anger nor resentment, simply a determination to out-plan and out-play the enemy.

If he accepted defeat he would admit frustration, and for Captain Max Hunter that was impossible. Hadn't he survived a decade of frontier conflict with an adjustment index of zero-zero? Instead of hopelessly weighing the odds stacked against him, he counted the advantage which a single man held in maneuverability and rapid change of pace.

He walked along the museum street, the blaster in his hand. A block away rose the bulk of a factory building and behind it towered the monster of center-city, transformed into a fairyland by the glow of lights on the many levels. Hunter's eye followed the pattern up toward the top, hidden above the blanket of haze.

The top! Luxury casinos and the castles of the cartels. Werner von Rausch and his empire of United Researchers. Werner von Rausch, who gave orders and Ann Saymer disappeared. Werner von Rausch, who gave new orders and Mrs. Ames lay murdered in her living room.

But behind the façade of his spacefleet and his private army, behind his police mercenaries, Werner von Rausch was one man--an old man, Hunter had been told--and a vulnerable target. Hunter weighed his changes, and the margin of success seemed to be balanced in his favor.

It was not what they would expect him to do. They had framed him for murder and he should now be running for his life. The hunted turned hunter. Hunter grinned savagely, enjoying his pun.

* * * * *

He slipped the blaster under his belt, leaving the scarlet jacket open to his navel so that the loose folds would conceal the outline of the weapon. He would have no trouble reaching the top level.

The resort casinos, like the mid-city amusement area, were open to any citizen. Special autojets, with destinations pre-set for the casino flat, were available in every monorail terminal. Hunter could by-pass a probe inspection at a regular metro-entry. The nearest terminal, from the north-coast line, was less than a quarter of a mile away.

As Hunter entered the industrial district he heard the turmoil of an angry crowd. He came upon them suddenly, swarming at the gates of a factory close to the terminal.

Eric Young's trouble-makers, he thought with a worried frown, jumping obediently when the big boss spoke the word. In less than five years Eric Young had turned the union into a third cartel, more powerful than Consolidated or United because the commodity Young controlled--human labor--was essential to the other two.

A third cartel! Suddenly Max Hunter understood why the cartels had to have Ann's patent at any cost. The absolute control of the human mind! It was the only weapon which Consolidated or United could use to break Young's power.

Hunter shouldered his way through the strikers toward the terminal. Though he wore no U.F.W. disc, he felt no alarm. Eric Young's strike riots were always well-managed. None of the violence was real and no one was ever seriously hurt.

But these trouble-makers seemed absurdly well-disciplined. They stood in drill-team ranks, moving and shouting abuse in perfect unison. Then Hunter saw their faces, as blank as death masks--and in all their skulls the still unhealed scalpel wound, as well as an occasional projecting platinum strand which sometimes caught the reflected light.

Max Hunter felt a chill of terror. He was walking in a human graveyard of living automatons, responding to the transmission from Ann's machine. United had lost no time in putting the thing to work. This was no ordinary strike, but the opening skirmish in the conflict that would wreck both Consolidated and the Union of Free Workers.

Hunter entered the monorail terminal. It was deserted except for a woman who stood by the window looking out at the crowd. She was wearing a demure, pink dress. Her face was plain, and she had used no cosmetic plasti-skin to make it more striking. Her brown hair, streaked with a gray which she took no trouble to hide, was pulled into a bun at the back of her neck.

Surprisingly, Hunter thought she was pretty, perhaps because she was so different from the eternal, baby-faced
adolescent who thronged the city in a million identical duplications.

Hunter knew he had seen her before. He couldn't remember where. She shifted her position slightly and the light cast a sharp, angular shadow on her face. Then he knew.

"Dawn!" he cried.

Startled, she turned to face him with a strange look in her eyes.

"I was hoping you wouldn't recognize me, Captain Hunter," she said.

"What are you doing here--dressed like some dowdy just in from a farm sector?" he asked, his gaze incredulous.

"We're all of us a mixture of different personalities," she replied. "I work for an entertainment house, yes. But I also have some of the qualities of your Ann Saymer. Don't take offense, please. Ann and I are both interested in the maladjusted. She wants a quick cure. I'm looking for the cause."

"Here?"

"Wherever there are people who face an emotional crisis--the men who come to Number thirty-four, or a mob of strikers. I want to know why we react in the way we do, and what makes up the frustration pattern that crowds us across the borderline into insanity."

"You sound like a psychiatrist," he said.

"I hold a First, Captain Hunter."

"And you work in an entertainment house?"

"Tell me about yourself, Captain. Have you found Ann yet?"

He looked away quickly.

"No," he said, his face hardening.

"And you still haven't had a chance to use your blaster?"

He directed an appraising glance at her. The question might imply a great deal. Did she somehow know what had happened at Mrs. Ames'? Did she know he was a fugitive?

A dozen police mercenaries appeared abruptly at the end of the street. Since the police had never been used to break a strike, Hunter guessed that this was Consolidated's answer to Werner von Rausch's new weapon.

The mercenaries drew their blasters and ordered the mob to disperse. The automatons turned to face them. And as they turned they fell silent--the cloying, choking silence of the tomb. Like marching puppets, the mob moved toward the police. Clearly Hunter could hear a shrill voice ordering them to halt.

Hunter felt a sickening inner horror. How could the mob obey when they heard nothing but the enslaving grid, and responded to neither fear nor reason? Still they moved forward, in a robot death march. Whatever happened, it was a situation Young could turn to his advantage. If the mercenaries killed unarmed workers, it could be turned into superb propaganda. And ultimately, by sheer weight of numbers, the defenseless mob could overwhelm the mercenaries.

White fire leaped from the blasters. The first rank fell, but the mob marched blindly across the smoking corpses. The mercenaries fired again. It was slaughter--brutal and pointless--of slaves unaware of their danger, unable to save themselves.

Without understanding his own motivation--and without caring--Max Hunter leaped into the sill of the terminal window. There he was in a position to fire over the heads of the mob. The blast from his weapon arrowed into the line of police mercenaries.

Three fell in the agony of the flames. The rest, glad for an excuse to stop the slaughter, turned and fled. Like clockwork things, the mob turned back and resumed its precision demonstration in front of the factory.

Hunter slipped white-faced into a terminal bench. His hand trembled as he jammed the blaster back beneath his belt.

"Why did you do it, Captain?" Dawn asked.

How could he answer her, without saying he had seen the grids in their skulls? And he wasn't ready to trust Dawn to that extent.

"The people couldn't help themselves," he said ambiguously.

"Because they're in the U.F.W. and Eric Young cracks the whip. Is that what you mean?"

"They weren't aware of their own danger."

"Miscalculating the risks then? But that's part of the system, Captain. If you can't fight your way up to the top--"

"Then the system is utterly vicious."

"You don't mean that," she said.

"Why not? We're living in a jungle society. It's nothing but conflict--conflict on the frontier and conflict here from the time they put you in the general school."
"Only the children who have the intelligence--"

"But why?" he interrupted fiercely. "Where does it get us?"

"We have a stable society," she told him. "Peace of a sort. Law enforcement, too, and a chance to build something better when we learn how."

"Something better?" He laughed as he stood up. "We'll get that when we pull this hell apart, and not before."

She put her hand on his arm. "No, Captain. It's not realistic to say that. Over and over again in the past we wrecked civilization because good-hearted and conscientious people thought there was no other way to create a finer world. It didn't work, because violence is madness. This time we have to begin where we are and build rationally. We can, you know, when we understand what we have to build with."

"What else do we need to know, Dawn? You're falling back on the typical double-talk of the psychiatrists. With all the application of physical science that we have--"

"I wasn't thinking of technology, Captain. Civilization isn't machines. It's people. Our accumulation of knowledge is tremendous, but essentially it means nothing because we know so little about ourselves. It's absurd to talk of making something better until we really know the individual we're making it for."

"Go ahead," he countered angrily. "Pussy-foot around with your cautious experiments, make sure nobody gets hurt--and you'll all end up slaves. As for me, I'm going to find Ann and get out while there's still time."

"Always the same two alternatives," Dawn said wearily. "Pull down the world, or run away from it. We need the courage to try something different. We need men who will act like men. I thought, Captain, by this time--" She looked up into his eyes. "Where are you going?"

"To the top--the casinos." Her abrupt question took him off balance and almost surprised him into telling the whole truth.

"Top level." She paused, studying his face. "That's logical, of course. You'll rescue your woman and run away--perhaps to the frontier, or to a forgotten world too insignificant to be claimed by either cartel. It all sounds so easy, doesn't it? You have friends in the service. They'll smuggle you away from Sector West." She hesitated again. "Running away is insanity, too, Captain. But that is one thing you still have to learn."

VII

Max Hunter rode the autojet to the casino. As the machine rose past the city levels, he found himself thinking less about Ann and a good deal more about Dawn--a Recreational companion woman who was simultaneously a psychiatrist. Where did she really fit in the subtle battle between the titan cartels? Which of them was her ally--or did Dawn represent another element as yet unidentified?

Knowing Ann Saymer had taught Hunter a wholesome respect for the thinking of a First in Psychiatry. They operated with a deviousness that made cartel treacheries seem like child's play. He knew that Dawn had manipulated their conversation in the terminal to her own ends. Behind that deftly-phrased patter of words, what else had she tried to tell him? And what had she tried to find out? "Top level," she had said. "That's logical." Why logical? Logical to whom? Did she know where he was going and why?

The autojet thudded on the casino flat. A female attendant, robed in a skin-colored sheath bright with amber jewels, held open the cab door for him. Hunter entered the nearest casino. At the door he showed his saving record in the Solar First National Fund, and a casino teller issued him a ten thousand credit limit, the smallest denomination available. The resorts weren't wasting effort on pikers.

Although the casinos everywhere in the system were popular with spacemen, Hunter had never been to the top level before because Ann had seen to it that his surplus credits went into their savings.

It was Hunter's opinion that he hadn't missed much. The Los Angeles resorts duplicated, on an elaborate scale, the most unsavory establishments of the frontier. Anything which by any stretch of a perverted imagination could be defined as entertainment was available--at a price.

It was early and the crowd was still small. It consisted of spacemen on the usual furlough binge, a handful of suburbanites who had hoarded a half-year's savings for this one-night fling in the big resorts, and a dozen bright-faced executives from the lower levels of the cartel hierarchy. The big brass would turn up later on, at a more fashionable hour.

At all costs, Hunter had to keep himself inconspicuous. His uniform was not entirely out of place, although Consolidated did issue its commanders a formal outfit--more gold braid, a jeweled insignia, and a jacket cut to emphasize the broad shoulders.

Hunter stopped at the snack bar and wolfed a plate of cold cuts, the first food he had eaten since morning. Then he moved indirectly across the pillared gambling pavilion, pausing at two tables to place bets. His objective was to find a vantage point in the upper floor of the casino where he could observe the geographic layout of the top level.

He slipped quickly into the dark well of an emergency stairway, feeling reasonably sure that no one had seen him leave the game room. More than half an hour had passed since he had fled Mrs. Ames' rooming house and he
was convinced that very shortly--if they had not done so already--the police would put out a general alarm.

As a matter of course, there would be inquiries at the top level, but at first they would be made by police
mercenaries. No one in the casino had any reason to identify Hunter as the fugitive. Later on, of course, when the
police used electronic trackers, he wouldn't stand a chance. But before that happened he intended to make a deal
with Werner von Rausch.

At the top of the stairs he found a tower window which afforded a crow's nest view of the top level. The twelve
casinos, bright with lights, occupied more than half the area. Beyond the resort parkland was the small, white
government building, dignified by its simplicity among so much ostentation. Beside it was the transparent semi-

circle housing the top landing of the center-city lifts. A third structure—a grotesque mechanical monster trapped in
the heart of a spider-web of converging wires—was the power distribution center for the top level.

In back of the government building a high, metal-faced fence knifed across the level. That fence guarded the
forbidden home-ground of the titans. Hunter could see the silhouette of the cartel castles rising against the sky, two
gigantic masses of stone. The one on the west was Farren's; the eastern one, Von Rausch's. That much and no more
was common knowledge.

Were the two families, who had fought for so long to control the empire beyond the stars, on speaking terms
here? Did they observe the social amenities in the same spirit that their companies enforced the sham peace on
earth? In their lonely, lofty isolation, what amusements did they enjoy? What contributed to the enrichment of the
lives of those fragile beings who possessed the wealth of the galaxy?

Hunter was sure no armed guards patrolled the forbidden paradise. There was no need for them, for scanners
formed a protective grid over the area. An autojet, attempting a landing from any direction, would break a beam and
instantly become the target for the autoblasters erected at intervals along the fence. A man attempting to scale the
wall would meet the same lethal charge.

Hunter saw one small gate with an identification screen mounted in front of it. Obviously the gate would open
to the handprint of a Von Rausch or a Farren. But a stranger would find himself standing in the line of fire of two
blasters, conspicuous over the gate.

The scanners, the blasters, the identification screen—all the complex, electronic watchdogs—depended solely
upon power. Countless other people, Hunter knew, had realized that. Only mechanically produced power made the
area invulnerable. Anyone could break through the fence. It hadn't been done before, perhaps, because no other man
had ever had Hunter's motivation. None had been a fugitive on the run.

Hunter made his way out of the casino and crossed the park in the direction of the government building.
Sheltered by the trees from the blaze of light, he was able to see the stars, bright in the velvet sky. The endless
universe! Somewhere he could find a haven for himself and Ann, a pinprick of light in the high-arching firmament
which the cartels had overlooked.

Dawn had said that running away was madness. But what alternative did he have? To stay, and attempt to make
the cartel rat-race over, sweetly and rationally so that no one would be hurt? Hunter laughed bitterly. Von Rausch
had the Exorciser, and he could keep it. It would be part of the bargain the captain thought he could make to save
Ann. With that weapon, Von Rausch would sooner or later tear his own world to shreds. No man in his right mind
would want to stay around to pick up the pieces—if any. He drew his blaster and took careful aim at the power
distribution center.

The machine exploded. Burning wires sang in the air. In the casinos the lights winked out, and the
entertainment machines went dark. Hunter heard the shrill screaming of the trapped crowd. He knew that it would
bring the police running, but he also knew they would have arrived shortly in any case. The important thing was that
the electronic watchdogs on the wall were now lifeless.

Hunter blasted open the gate, and took the path that led east.

The Von Rausch castle—and the word was scarcely a metaphor—was something lifted bodily out of a Tri-D
historical romance, complete with porticos, battlements, stone-walled towers and an imitation moat where
mechanical swans floated on the dark water.

He crossed the moat on a rustic footbridge of plastic cleverly fabricated to seem like crudely hewn wood.
Through a high, narrow window he saw a pale flicker of light. The pane was thick with grime.

Hunter could distinguish nothing in the room except a thin, elderly woman who seemed to be moving around a


"Goodness, dear, how should I know? Werner never comes to my parties."

Hunter noticed the table, then, set for eight, its gleaming silver and gold-rimmed china glowing in the soft candle light.

"Your Cousin Charlotte's already here, Karl." The woman gestured gracefully toward the table. "And little Helmig. They know how important it is to come on time."

He felt horror—and unconscious pity—as he realized the truth. Yet he tried once more to get from her the information he wanted.

"Oh, bother with Werner," she answered, pouting. "If you must know, I didn't even invite him. He's such a bore among young people."

She saw the blaster in Hunter's hand and pushed it aside gently, with a grimace of disapproval. "I don't like you to have these toys, Karl. Next thing, you'll be wanting to join the army."

Hunter flung himself out of that room, into a dark and musty hall. Behind him he heard the woman still talking, as if he had never left her. He blundered from one bleak room to another, rooms that were like tombs smelling of dust and decay.

On the second floor he came upon a small, balding man who sat reading at a desk in a room crammed with tottering stacks of old books. The light came from an antiquated electric lamp. Obviously the house had its own generating plant, independent of the power center Hunter had destroyed.

Hunter jerked up his blaster again. "Werner von Rausch?"

"One moment," the man said. Ignoring Hunter, the man quietly finished what he was reading, slipped a leather placemark into the book, and put it on top of a stack beside the desk. The pile promptly collapsed in a cloud of dust at Hunter's feet.

Max saw some of the title pages. The books were extraordinarily old, some of them with a printing date a thousand years in the past. The man pinched a pair of eye-glasses on his nose and studied Hunter carefully.

"You're from the police, I presume?" he asked.

"If you are Werner von Rausch--"

"I'm Heinrich. I sent in the report. Though, I must say, you couldn't have come at a more inconvenient time. I'm collating the spells tonight. I have them all, right here at my fingertips. And when I'm finished--" He seized the captain's jacket and his voice was suddenly shrill. "--I'll have the power to summon up any demon from hell. Think what that means! I'll be greater than Faust. I'll have more power than--"

"Where can I find Werner von Rausch?"

"Yes, Werner. Poor boy." Heinrich was calm again. "You'll have to do your duty, officer. He's been annoying me all afternoon. So much noise--a man can't think. He's in his shop at the end of the hall. But don't be too severe with him. Perhaps this time just a warning will make him see reason."

Hunter went back to the corridor, feeling again the shadow of horror at this sick distortion of reality. In the distance, beyond the metal fence, he heard the scream of sirens, and realized he had at best another three minutes before the police would be there. Three minutes to make a deal with Werner and save Ann.

Hunter pushed back the nightmare that welled up from the depths of his mind. It wasn't true; it couldn't be true. If it were, nothing in the jungle made sense.

VIII

As he felt his way along the hall, he passed the cage of a lift, a private transit between the house and the cartel offices on the city levels below. He noted it subconsciously, as a possible means of escape. But he was through running. He could make a deal with Von Rausch. After that the police wouldn't matter.

At the end of the corridor he came upon a paneled door. Behind it he could hear the hum of a motor, and knew that he had found Werner's shop, and the source of the noise that had disturbed Heinrich's research.

Hunter flung open the door. The light was bright and gay. On the floor, a fat old man sat hunched over the remote control console of a toy monorail system. Toy space liners and fighting ships buzzed in the air.

"Werner von Rausch?" Hunter whispered.

"You've come to play with me!" The fat, old man flashed the cherubic smile of a child. "And you brought me a blaster. Oh, let me see it! Let me see it!"

He clapped his hands eagerly.

Hunter turned and fled. The scream of the sirens still seemed no closer, but without assessing his chances Hunter sprang into the private lift. It dropped downward toward its unknown destination. What that was, Hunter didn't care. Anything to escape from so hideous a madhouse.

The Von Rausch clan: an old lady who lived with ghosts; a scholar of demonology; a patriarch lost in an eternal childhood. All of them running away into their own private fantasies.

But this Was the family which ruled a cartel and directed the conquest of half the galaxy; these were the most
powerful human beings who had ever lived. And they were escaping into insanity. Escaping what? Responsibility?
The jungle of the cartels?
"Two alternatives," Dawn had said. "Pull down the world or run away from it." The Von Rausches had made
this mess and then fled in horror from their own brutal and destructive creation.
The lift cage jerked to a stop. The door opened on a warmly lighted executive office where a white-haired man
sat at a desk which had been cut from a single slab of Venusian crystal. A much enlarged projection of the United
Researchers’ emblem glowed from the Wall. Hunter raised his weapon.
The old man gestured imperiously. "Don't be a fool, Captain. I wouldn't be here unless I had adequate
protection. There are blasters in the wall, which I can trigger with a single spoken word."
"You want to finish the job your men bungled this afternoon?"
"Not our men, Captain. We got in on this deal a little late. We knew nothing about this psychiatric patent until
the strikes started today."
"But Ann Saymer--"
"Unfortunately, we do not have her. It's Consolidated. We sent our men out to bring you in, Captain. We
wanted your help. When you got away, it didn't occur to me that you would go to the top level. Not until we heard
the report of the destruction of the power distributor. It was easy enough to anticipate your moves after that.
"If you hadn't used the private Von Rausch lift, you would have gone out again through the gate, where my
men were waiting. Naturally we couldn't send them inside. You can understand why, of course."
Hunter heard only vaguely what the man was saying, for abruptly the pattern fell into place. Neither
Consolidated nor United had Ann or the Exorciser. Each cartel suspected the other because they hadn't yet adjusted
to the idea that a third cartel existed: Eric Young's union.
Ann's micropic had told the literal truth. She had taken her commission-job with the biggest private clinic,
operated by the U.F.W. It was a dead giveaway when Young struck both cartels simultaneously, if Hunter had read
the data correctly.
Hunter moved toward the crystal desk. "I know where Ann is, sir," he said. "I can--"
"You can stay where you are," the old man interrupted. "One hour ago, my friend, I was ready to offer you a
deal. Since then you've seen--" He raised his eyes toward the ceiling. "You've seen what's up there. Only four of us
know that secret. We don't relish sharing it with a fifth."
"Unless you destroy Ann's patent, you're finished anyway."
"Destroy, Captain?" The senile voice turned silky. "No, we want that machine intact."
"If you'll guarantee Ann's safety and mine--"
"You have an exaggerated idea of your own importance. You would have been useful to us, particularly since
you have been a Consolidated employee. But this thing you blundered into up there destroys your value entirely. It
makes you potentially as dangerous as the Saymer patent. That's my opinion.
"The other three who share the Von Rausch secret have an equal vote in deciding the issue. They may reverse
my decision. I've asked them to come here, and I'm waiting for them now."
The old man was so intent upon making a logical explanation of the death sentence he pronounced--without
putting it into words--that he didn't notice Hunter edging closer to the desk. Captain Hunter saw no chance for a
reprieve when the other three arrived. Why wait? Having fought on the frontier, Hunter was aware of a property of
the Venusian crystal which possibly the old man did not know. It was impervious to blaster fire.
Hunter acted with the split-second timing of an experienced spaceman. He swung his body in a flying tackle
against the old man's chair and in the same swift motion pushed himself into the leg cubicle carved in the crystal.
As the chair toppled and before he realized his own danger, the old man cried the code word that triggered the
wall blasters. He was instantly caught in the deadly cross-fire.
As the weapons slid back into the wall slots, Hunter leaped for the door, and passed quickly through it. The
outer hall was empty. He sprinted for the walk-way, the echoes of the blast still ringing in his ears.
A destination marker glowed above a nearby metro-entry. It told him he was on the Twenty-eighth level of
center-city. On a large, public Tri-D screen Hunter saw a picture of the strike mob in the industrial area. That was all
the data he needed. If the mob was still in the streets, Eric Young was still manipulating the transmitter.
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the data he needed. If the mob was still in the streets, Eric Young was still manipulating the transmitter.
Hunter took an unchartered autojet and dialed as his destination the U.F.W. clinic. It was the largest structure in
the industrial area, made from luminous, pink, Martian stone, which had been imported at great cost--and with a
blaze of publicity.
Completed only three years before, the U.F.W. clinic had been given a continuous flood of publicity. Numerous
Tri-D public service programs had explored its wards, its laboratories, and its service centers, and even in a distant
spaceship Hunter had not remained in ignorance of the build-up. The knowledge served to his advantage now, for he
knew just where Young's personal penthouse was located and exactly how to reach it.
There were no armed guards or automatic probes in the clinic. Such an outward display of force wouldn't have jibed with Young's public personality. He was the much-loved official head of a union whose membership totaled millions.

Any protective device would have distorted the illusion and destroyed the legend completely.

Young's penthouse, thirty floors above street level, was the modest garden cottage which had been so widely publicized and that, too, was a part of his illusion. When Hunter saw the tiny house he was able to appreciate Young's showmanship, his insight into the mental processes of the credulous.

Hunter moved toward the door. Light glowed inside the cottage, but through the broad, front window he could see no one. He felt a momentary doubt. Had he guessed wrong? Was Young holding Ann somewhere else?

But Hunter was sure Young had not taken that precaution. It would have involved risks he would not have to contend with at the clinic, unless he had been reasonably certain he would be found out. And Young had expected to prevent that by keeping Consolidated and United at each other's throats.

Hunter kicked open the door. The three small rooms in the cottage were empty—until a man wearing a union smock emerged from the narrow galley. He hadn't been there a moment before when Hunter examined the cubicle, and there was no rear entry to the cottage.

"Mr. Young isn't here, sir." The man said, gliding swiftly toward him. "If you wish to leave a message—"

Hunter saw the telltale grid wire in the stranger's forehead. He ducked aside instinctively as the knife gleamed in the man's hand. With an odd, sighing sound, the blade arched through the air, smashing the picture window. Hunter's fist shot out, and the man dropped unconscious.

Hunter went into the galley and found what he had missed before—the false bank of food slots which masked a narrow stairway. He ran quickly down the steps, and found the opulent living quarters Eric Young had concealed on the clinic floor beneath the innocent garden cottage. Here in gaudy splendor, in the tasteless clutter of objects assembled from every quarter of the cartel empire, was the true index to the infinite ambition of the U.F.W. boss.

A dozen men and women lurched at Hunter from an open hall. They wore white hospital robes and their foreheads were still bandaged. Obviously they were patients with recently grafted slave grids. Obedient to the transmission, they fought with a desperate, savage fury—and a clumsy lack of co-ordination which caricatured normal human behavior.

Hunter repulsed their attack without difficulty. Yet he felt an inner disgust and loathing as if he were using his strength to defeat helpless children. In two minutes it was over. One of the men was dead, his head bandage torn loose, and the grid ripped out of his skull. Three more lay sprawled out on the floor, bleeding badly from freshly opened incisions.

Hunter drew his blaster and entered the thickly-carpeted hall, glowing with the soft, pink light of the luminous, Martian stone. He cried Ann's name. His voice fell hollowly in the silence, but there was no response. He moved to the end of the hall and pushed open a narrow door.

He saw the white-tiled laboratory, Ann's transmitter standing on a long table with new platinum grids piled by the dozen beside it, and the barrack rows of hospital beds. From the angle of the room which was hidden by the half-open door, Ann Saymer ran toward him with outstretched hands, crying his name. He took a step toward her. And something struck the back of his head.

IX

Hunter's mind rocked. He felt himself falling down the long spiral into unconsciousness. The blaster slipped from his hand and his knees buckled. But he clawed blindly, with animal instinct, at the hands closing on his throat.

His head cleared. He saw Eric Young's dark face close to his. Hunter swung his fist into Young's stomach, and the hands slid away from his throat. Captain Hunter sprang to his feet, crouching low to meet Young's next attack. Young's swing went wild. Hunter's fist struck at the flabby jaw. Eric Young backed away, reeling under the hammer blows, until he came up against the laboratory table.

Suddenly he slashed at Hunter with a scalpel. The blade nicked Max's shoulder and cut across his jacket. The cloth parted, sliding down his arms and pinning his hands together. In the split-second it took Hunter to free himself from the torn jacket, Young swung the scalpel again. Hunter dodged. Miscalculating his aim, Eric Young tripped over Hunter's outstretched leg and fell, screaming, upon the point of his own weapon.

Hunter stood for an instant with his legs spread wide, looking down at Young. Then he dropped to his knees and rolled the grievously wounded man over on his back. The hand grasping the scalpel slowly pulled the blade from the abdominal wound. Blood pulsed out upon the white tile. Young was still barely alive.

Hunter walked toward the transmitter, where Ann stood, saying nothing, her eyes wide and staring. A tremendous conflict was raging within him. Running away was no solution, but what if he could destroy the system itself? Break the mold and start anew.

He had the instrument that would do it, the hundreds of obedient slaves Young had already turned loose on the
streets. With Ann's transmitter he could transform the disciplined strike of human automatons into a civic disaster. Terror and violence uprooting the foundations of the city.

But a moment's madness could not overthrow the enduring rationality of Hunter's adjustment index. To loose that horror was to set himself in judgment upon the dreams and hopes, the perversion and the sublimity, of his fellow men. To play at God--a delusion no different from Eric Young's.

Savagely Hunter lifted a chair and started to swing it at the transmitter. Instantly, Ann Saymer turned to face him, the blaster clasped tightly in her hand.

"No, Max."
"But, Ann, those people outside are in desperate danger--"
"I've gone this far. I won't turn back." In her voice was the familiar drive, the ambition he knew so well. But now it seemed different, a twisted distortion of something he had once admired.

"We don't need Eric Young," she said. "He's bungled everything. You and I, Max--" She caressed the transmitter affectionately. "With this, we'll possess unlimited power."

"You mean, Ann--" He choked on the words. "You came here of your own free will? You deliberately planned Mrs. Ames' murder?"

"She was dangerous, Max. She guessed too much. We knew that when we monitored the call you made from the spaceport. But in the beginning we weren't going to make you responsible. We thought the strangers in the house--your attempt to expose the other woman who called herself Mrs. Ames--would be enough to get you committed to a clinic. I didn't want you to be hurt, Max."

"Why, Ann?" His voice was dead, emotionless. "Because you loved me? Or because you wanted me to be your ace in the hole, if you failed to manage Eric Young the way you thought you could?"

"That doesn't matter now, Max, dear. I thought Eric had what I needed. But I was misjudging you all along."

"You're still misjudging me, Ann. I'm going to smash this machine and afterward--"

"No you aren't, Max," she said coldly. "I'll kill you first."

Calmly she turned the dial on the blaster. He lifted the chair again, watching her face, still unable to accept what he knew was true. This was Ann Saymer, the woman he had loved. It was the same Ann whose ambition had driven her from the general school to a First in Psychiatry.

With a fighting man's instinct, Hunter calculated his chances as he held the chair high above his head. It was Ann who had to die. He would accomplish nothing if he smashed her transmitter. She knew how to build another. If he threw the chair at her rather than the Exorciser and if he threw it hard enough--

From the door a fan of flame blazed out, gently touching Ann. She stood rigid in the first muscular tension of paralysis. Hunter dropped the chair, shattering the transmitter. He turned and saw Dawn in the doorway. Somewhere deep in his subconscious mind he had expected her. He was glad she was there.

"We've known for a long time we would have to break up their little partnership," Dawn explained. "After I talked to you this morning, Captain, I persuaded the others to hold off for another day or so. A clinical experiment of my own.

"It was unkind of me, I suppose, to make you the guinea pig. But I wanted to watch your reactions while you fought your way to the truth. Now you know it all--more than you bargained for. And you know what we're trying to do. Are you willing to join us?"

He looked at her.

"In your third alternative--the cautious, rational rebuilding?"

"After men understand themselves. When we're able to answer one question: why did you and Ann Saymer, with identical backgrounds, and intelligence, and an identical socio-economic incentive, become such different personalities? What gives you a zero-zero adjustment index that nothing can shake? Not the psychiatric shock of war, Captain. Not physical pain alone or the treachery of the girl you love. We need you, Captain. We need to know what makes you tick."

"That 'we' of yours. Just what does that embrace?"

"A cross-section of us all," she told him. "Psychiatrists, executives in both cartels, union officials. We've been working at this for a good many years. We want to make our world over, yes. But this time with reason and without violence--without sacrificing the good we already have."

"And you yourself, Dawn. Who are you?"

"I represent that nonentity called the government, Captain."

"A nonentity wouldn't make you what you are, Dawn."

"My name, Captain--" She drew a long breath. "My name is Dawn Farren. The rest of my family is dying out as the Von Rausches are. Unlimited power has a way of poisoning the human mind. If wealth is our only ethical goal, what do we really have when we possess it all? Madness. Both cartels are shams, Captain Hunter, just as your
frontier wars are shams.

"Yes, you may as well know that, too. Neither fleet has actually fought the other for a good many years. The planets you blast are hulks already long dead. It's all a sham, but we have to keep it alive. We have to make it seem real--until we're sure we've found something better and more workable for all of us."

The tension in Ann Saymer's muscles started to relax. Very slowly her body began to slump, in the secondary stage of paralysis.

"What about her?" Hunter asked. "She can still make another Exorciser--"

"The dream of enslaving mankind is always insanity. We'll put her in a public clinic, of course. We may have to use her own machine once more to erase the memory of its structure from her mind. After that the patent drawings will be destroyed. It's not a superficial cure for maladjustment that we're after, Captain Hunter, but the cause. All of Ann's research was up a blind alley--a brilliant waste."

Suddenly Dawn screamed a warning and leveled her blaster at Eric Young. Hunter sprang back as Dawn fired. But her timing was a second too late. In a last, blazing agony of life-before-death Young had regained consciousness long enough to hurl the scalpel at Hunter's back. Ebbing strength distorted his aim. The blade plunged into Ann's heart as she slumped against the wall.

After a long pause, Max Hunter moved toward Dawn and took her arm. He clenched his jaw tight and drew her quickly into the hall. "I want out, Dawn. There's no healing here. I won't feel free again until I can look up at the stars."

"The stars. Then you're going back to the service, Captain? You're running away?"

He didn't answer her until they stood in Eric Young's garden.

"Sham battles for shadow cartels," he said. "That's a child's subterfuge for the Tri-D space heroes. No, Dawn, the real war is here in the struggle for information about ourselves so that we can build a new world of freedom and human dignity. You say you need me. All right, Dawn, you've enrolled a recruit."

"It will be a long, slow war, Captain," she said, her eyes shining. "We may never see a victory, and--we can never make a truce. But at least we've learned how to go about solving the problem--after ten millennia of trial and error."
The colored boy gazed at Don and me with a look of terror. "But I tell you I seen it!" he insisted. "An' it's down there now. A ghost! It's all white an' shinin'!"

"Nonsense, Willie," Don turned to me. "I say, Bob, what do you make of this?"

"I seen it, I tell you," the boy broke in. "It ain't a mile from here if you want to go look at it."

Don gripped the colored boy whose coffee complexion had taken on a greenish cast with his terror. "Stop saying that, Willie. That's absolute rot. There's no such thing as a ghost."

"But I seen--"

"Where?"

"Over on the north shore. Not far."

"What did you see?" Don shook him. "Tell us exactly."

"A man! I seen a man. He was up on a cliff just by the golf course when I first seen him. I was comin' along the path down by the Fort Beach an' I looked up an' there he was, shinin' all white in the moonlight. An' then before I could run, he came floatin' down at me."

"Floating?"

"Yes. He didn't walk. He came down through the rocks. I could see the rocks of the cliff right through him."

Don laughed at that. But neither he nor I could set this down as utter nonsense, for within the past week there had been many wild stories of ghosts among the colored people of Bermuda. The Negroes of Bermuda are not unduly superstitious, and certainly they are more intelligent, better educated than most of their race. But the little islands, this past week, were echoing with whispered tales of strange things seen at night. It had been mostly down at the lower end of the comparatively inaccessible Somerset; but now here it was in our own neighborhood.

"You've got the fever, Willie," Don laughed. "I say, who told you you saw a man walking through rock?"

"Nobody told me. I seen him. It ain't far if you--"

"You think he's still there?"

"Maybe so. Mr. Don, he was standin' still, with his arms folded. I ran, an'--"

"Let's go see if he's there," I suggested. "I'd like to have a look at one of these ghosts."

But even as I lightly said it, a queer thrill of fear shot through me. No one can contemplate an encounter with the supernatural without a shudder.

"Right you are," Don exclaimed. "What's the use of theory? Can you lead us to where you saw him, Willie?"

"Ye-es, of course."

The sixteen-year-old Willie was shaking again. "W-what's that for, Mr. Don?"

Don had picked up a shotgun which was standing in a corner of the room.

"Ain't no--no use of that, Mr. Don."

"We'll take it anyway, Willie. Ready, Bob?"

A step sounded behind us. "Where are you going?"

It was Jane Dorrance, Don's cousin. She stood in the doorway. Her long, filmy white summer dress fell nearly to her ankles. Her black hair was coiled on her head. In her bodice was a single red poinsettia blossom. As she stood motionless, her small slight figure framed against the dark background of the hall, she could have been a painting of an English beauty save for the black hair suggesting the tropics. Her blue-eyed gaze went from Don to me, and then to the gun.

"Where are you going?"

"Willie saw a ghost." Don grinned. "They've come from Somerset, Jane. I say, one of them seems to be right here."

"Where?"

"Willie saw it down by the Fort Beach."

"To-night?"

"Yes. Just now. So he says, though it's all rot, of course."

"Oh," said Jane, and she became silent.
She appeared to be barring our way. It seemed to me, too, that the color had left her face, and I wondered vaguely why she was taking it so seriously. That was not like Jane: she was a level-headed girl, not at all the sort to be frightened by Negroes talking of ghosts.

She turned suddenly on Willie. The colored boy had been employed in the Dorrance household since childhood. Jane herself was only seventeen, and she had known Willie here in this same big white stone house, almost from infancy.

"Willie, what you saw, was it a--a man?"
"Yes," said the boy eagerly. "A man. A great big man. All white an' shinin'."
"A man with a hood? Or a helmet? Something like a queer-looking hat on his head, Willie?"
"Jane!" expostulated Don. "What do you mean?"
"I saw him--saw it," said Jane nervously.
"Good Lord!" I exclaimed. "You did? When? Why didn't you tell us?"
"I saw it last night." She smiled faintly. "I didn't want to add to these wild tales. I thought it was my imagination. I had been asleep--I fancy I was dreaming of ghosts anyway."
"You saw it--" Don prompted.
"Outside my bedroom window. Some time in the middle of the night. The moon was out and the--the man was all white and shining, just as Willie says."
"But your bedroom," I protested. "Good Lord, your bedroom is on the upper floor."
But Jane continued soberly, with a sudden queer hush to her voice, "It was standing in the air outside my window. I think it had been looking in. When I sat up--I think I had cried out, though none of you heard me evidently--when I sat up, it moved away; walked away. When I got to the window, there was nothing to see." She smiled again. "I decided it was all part of my dream. This morning--well, I was afraid to tell you because I knew you'd laugh at me. So many girls down in Somerset have been imagining things like that."

To me, this was certainly a new light on the matter. I think that both Don and I, and certainly the police, had vaguely been of the opinion that some very human trickster was at the bottom of all this. Someone, criminal or otherwise, against whom our shotgun would be efficacious. But here was level-headed Jane telling us of a man standing in mid-air peering into her second-floor bedroom, and then walking away. No trickster could accomplish that.

"Ain't we goin'?" Willie demanded. "I seen it, but it'll be gone."
He disregarded Jane as he walked to the door, but she clung to him.
"I'm coming," she said obstinately, and snatched a white lace scarf from the hall rack and flung it over her head like a mantilla. "Don, may I come?" she added coaxingly.
He gazed at me dubiously. "Why, I suppose so," he said finally. Then he grinned. "Certainly no harm is going to come to us from a ghost. Might frighten us to death, but that's about all a ghost can do, isn't it?"

We left the house. The only other member of the Dorrance household was Jane's father--the Hon. Arthur Dorrance, M.P. He had been in Hamilton all day, and had not yet returned. It was about nine o'clock of an evening in mid-May. The huge moon rode high in a fleecy sky, illumining the island with a light so bright one could almost read by it.

"We'll walk," said Don. "No use riding, Willie."
"No. It's shorter over the hill. It ain't far."

We left our bicycles standing against the front veranda, and, with Willie and Don leading us, we plunged off along the little dirt road of the Dorrance estate. The poinsettia blooms were thick on both sides of us. A lily field, which a month before had been solid white with blossoms, still added its redolence to the perfumed night air. Through the branches of the squat cedar trees, in almost every direction there was water visible--deep purple this night, with a rippled sheen of silver upon it.

We reached the main road, a twisting white ribbon in the moonlight. We followed it for a little distance, around a corkscrew turn, across a tiny causeway where the moonlit water of an inlet lapped against the base of the road and the sea-breeze fanned us. A carriage, heading into the nearby town of St. Georges, passed us with the thud of horses' hoofs pounding on the hard smooth stone of the road. Under its jaunty canopy an American man reclined with a girl on each side of him. He waved us a jovial greeting as they passed.

Then Willie turned us off the road. We climbed the ramp of an open grassy field, with a little cedar woods to one side, and up ahead, half a mile to the right, the dark crumbling ramparts of a little ancient fort which once was
for the defense of the island.

Jane and I were together, with Willie and Don in advance of us, and Don carrying the shotgun.

"You really saw it, Jane?"

"Oh, I don't know. I thought I did. Then I thought that I didn't."

"Well, I hope we see it now. And if it's human--which it must be if there's anything to it at all--we'll march it back to St. Georges and lock it up."

She turned and smiled at me, but it was a queer smile, and I must admit my own feelings were queer.

"Don't you think you're talking nonsense, Bob?"

"Yes, I do," I admitted. "I guess maybe the whole thing is nonsense. But it's got the police quite worried. You knew that, didn't you? All this wild talk--there must be some basis for it."

Don was saying, "Take the lower path, Willie. Take the same route you were taking when you saw it."

* * * * *

We climbed down a steep declivity, shadowed by cedar trees, and reached the edge of a tiny, almost landlocked, lagoon. It was no more than a few hundred feet in diameter. The jagged, porous gray-black rocks rose like an upstanding crater rim to mark its ten-foot entrance to the sea. A little white house stood here with its back against the fifty-foot cliff. It was dark, its colored occupants probably already asleep. Two rowboats floated in the lagoon, moored near the shore. And on the narrow strip of stony beach, nets were spread to dry.

"This way, Mister Don. I was comin' along here, toward the Fort." Willie was again shaking with excitement.

"Just past that bend."

"You keep behind me." Don led us now, with his gun half raised. "Don't talk when we get further along, and walk as quietly as you can."

The narrow path followed the bottom of the cliff. We presently had the open sea before us, with a line of reefs a few hundred yards out against which the lazy ground swell was breaking in a line of white. The moonlit water lapped gently at our feet. The cliff rose to our right, a mass of gray-black rock, pitted and broken, fantastically indented, unreal in the moonlight.

"I seen it--just about there," Willie whispered.

Before us, a little rock headland jutted out into the water. Don halted us, and we stood silent, gazing. I think that there is hardly any place more fantastic than a Bermuda shorefront in the moonlight. In these little eroded recesses, caves and grottoes one might expect to see crooked-legged gnomes, scampering to peer at the human intruder. Gnarled cedars, hanging precariously, might hide pixies and elves. A child's dream of fairyland, this reality of a Bermuda shorefront.

"There it is!"

* * * * *

Willie's sibilant whisper dispelled my roaming fancy. We all turned to stare behind us in the direction of Willie's unsteady finger. And we all saw it--the white shape of a man down near the winding path we had just traversed. A wild thrill of fear, excitement, revulsion--call it what you will--surged over me. The thing had been following us!

We stood frozen, transfixed. The shape was almost at the water level, a hundred feet or so away. It had stopped its advance; to all appearances it was a man standing there, calmly regarding us. Don and I swung around to face it, shoving Jane and Willie behind us.

Willie had started off in terror, but Jane gripped him.

"Quiet, Willie!"

"There it is! See it--"

"Of course we see it," Don whispered. "Don't talk. We'll wait; see what it does."

We stood a moment. The thing was motionless. It was in a patch of shadow, but, as though gleaming with moonlight, it seemed to shine. Its glow was silvery, with a greenish cast almost phosphorescent. Was it standing on the path? I could not tell. It was too far away; too much in shadow. But I plainly saw that it had the shape of a man. Wraith, or substance? That also, was not yet apparent.

Then suddenly it was moving! Coming toward us. But not floating, for I could see the legs moving, the arms swaying. With measured tread it was walking slowly toward us!

Don's shotgun went up. "Bob, we'll hold our ground. Is it--is he armed, can you see?"

"No! Can't tell."

Armed! What nonsense! How could this wraith, this apparition, do us physical injury!

"If--if he gets too close, Bob, by God, I'll shoot. But if he's human, I wouldn't want to kill him."

* * * * *

The shape had stopped again. It was fifty feet from us now, and we could clearly see that it was a man, taller
than normal. He stood now with folded arms—a man strangely garbed in what seemed a white, tight-fitting jacket and short trunks. On his head was a black skull cap surmounted by a helmet of strange design.

Don's voice suddenly echoed across the rocks.
"Who are you?"
The white figure gave no answer. It did not move.
"We see you. What do you want?" Don repeated.

Then it moved again. Partly toward us and partly sidewise, away from the sea. The swing of the legs was obvious. It was walking. But not upon the path, nor upon the solid surface of these Bermuda rocks! A surge of horror went through me at the realization. This was nothing human! It was walking on some other surface, invisible to us, but something solid beneath its own tread.

"Look!" Jane whispered. "It's walking—into the cliff!"

There was no doubt about it now. Within thirty feet of us, it was slowly walking up what must have been a steep ascent. Already it was ten feet or more above our level. And it was behind the rocks of the cliff! Shining in there as though the rocks themselves were transparent!

"Look!" Jane whispered. "Is it back of the rocks? Or is there a cave over there? An opening?"

"Let's go see." Don took a step forward; and called again:
"You—we see you. Stand still! Do you want me to fire at you?"

The figure turned and again stood regarding us with folded arms. Obviously not Don's voice, but his movement, had stopped it. We left the path and climbed about ten feet up the broken cliff-side. The face was at our level now, but it was within the rocks. We were close enough now to see other details: a man's white face, with heavy black brows, heavy features; a stalwart, giant figure, six and a half feet at the least. The white garment could have been of woven metal. I saw black, thread-like wires looped along the arms, over the shoulders, down the sides of the muscular naked legs. There seemed, at the waist, a dial-face, with wires running into it.

The details were so clear that they seemed substantial, real. Yet the figure was so devoid of color that it could have been a light-image projected here upon these rocks. And the contour of the cliff was plainly visible in front of it.

* * * * *

We stood gazing at the thing, and it stared back at us.
"Can you hear us?" Don called.

Evidently it could not. Then a sardonic smile spread over the face of the apparition. The lips moved. It said something to us, but we heard no sound.

It was a wraith—this thing so visibly real! It was apparently close to us, yet there was a limitless, intervening void of the unknown.

It stood still with folded arms across the brawny chest, sardonically regarding us. The face was strangely featured, yet wholly of human cast. And, above all, its aspect was strangely evil. Its gaze suddenly turned on Jane with a look that made my heart leap into my throat and made me fling up my arms as though to protect her.

Then seemingly it had contemplated us enough; the folded arms swung down; it turned away from us, slowly stalking off.

"Stop!" Don called.
"See!" I whispered. "It's coming out in the open!"

The invisible surface upon which it walked led it out from the cliff. The figure was stalking away from us in mid-air, and it seemed to fade slowly in the moonlight.

"It's going!" I exclaimed. "Don, it's getting away!"

Impulsively I started scrambling over the rocks; unreasoningly, for who can chase and capture a ghost? Don stopped me. "Wait!" His shotgun went to his shoulders. The white shape was now again about fifty feet away. The gun blazed into the moonlight. The buckshot tore through the stalking white figure; the moonlit shorefront echoed with the shot.

When the smoke cleared away, we saw the apparition still walking quietly forward. Up over the sea now, up and out into the moonlit night, growing smaller and dimmer in the distance, until presently it was faded and gone.

A ghost?
We thought so then.
CHAPTER II
The Face at the Window

This was our first encounter with the white invaders. It was too real to ignore or treat lightly. One may hear tales of a ghost, even the recounting by a most reliable eye-witness, and smile skeptically. But to see one yourself--
as we had seen this thing in the moonlight of that Bermuda shorefront--that is a far different matter.

We told our adventure to Jane's father when he drove in from Hamilton about eleven o'clock that same evening. But he, who personally had seen no ghost, could only look perturbed that we should be so deluded. Some trickster--or some trick of the moonlight, and the shadowed rocks aiding our own sharpened imaginations. He could think of no other explanation. But Don had fired pointblank into the thing and had not harmed it.

Arthur Dorrance, member of the Bermuda Parliament, was a gray-haired gentleman in his fifties, a typical British Colonial, the present head of this old Bermuda family. The tales or the ghosts, whatever their origin, already had forced themselves upon Governmental attention. All this evening, in Hamilton, Mr. Dorrance had been in conference trying to determine what to do about it. Tales of terror in little Bermuda had a bad enough local effect, but to have them spread abroad, to influence adversely the tourist trade upon which Bermuda's very existence depended—that presaged economic catastrophe.

"And the tales are spreading," he told us. "Look here, you young cubs, it's horribly disconcerting to have you of all people telling me a thing like this."

Even now he could not believe us. But he sat staring at us, eyeglasses in hand, with his untouched drink before him.

"We'll have to report it, of course. I've been all evening with the steamship officials. They're having cancellations." He smiled faintly at me. "We can't get along without you Americans, Bob."

I have not mentioned that I am an American. I was on vacation from my job as radio technician in New York. Don Livingston, who is English and three years my senior, was in a similar line of work—at this time he was technician in the small Bermuda broadcasting station located in the nearby town of St. Georges.

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We talked until nearly midnight. Then the telephone rang. It was the Police Chief in Hamilton. Ghosts had been seen in that vicinity this evening. There were a dozen complaints of ghostly marauders prowling around homes. This time from both white and colored families.

And there was one outstanding fact, frightening, indeed, though at first we could not believe that it meant very much, or that it had any connection with this weird affair. In the residential suburb of Paget, across the harbor from Hamilton, a young white girl, named Miss Arton, had vanished. Mr. Dorrance turned from the telephone after listening to the details and faced us with white face and trembling hands, his expression more perturbed and solemn than ever before.

"It means nothing, of course. It cannot mean anything."

"What, father?" Jane demanded. "Something about Eunice?"

"Yes. You know her, Bob—you played tennis down there with her last week. Eunice Arton."

I remembered her. A Bermuda girl; a beauty, second to none in the islands, save perhaps Jane herself. Jane and Don had known her for years.

"She's missing," Mr. Dorrance added. He flashed us a queer look and we stared at him blankly. "It means nothing, of course," he added. "She's been gone only an hour."

But we all knew that it did mean something. For myself I recall a chill of inward horror; a revulsion as though around me were pressing unknown things; unseen, imponderable things menacing us all.

"Eunice missing! But father, how missing?"

He put his arm around Jane. "Don't look so frightened, my dear child."

He held her against him. If only all of us could have anticipated the events of the next few days. If only we could have held Jane, guarded her, as her father was affectionately holding her now!

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Don exclaimed, "But the Chief of Police gave you details?"

"There weren't many to give," he replied. "I lighted a cigarette and smiled at his trembling hands. "I don't know why I should feel this way, but I do. I suppose—well, it's what you have told me to-night. I don't understand it—I can't think it was all your imagination."

"But that girl, Eunice," I protested.

"Nothing—except she isn't at home where she should be. At eleven o'clock she told her parents she was going to retire. Presumably she went to her room. At eleven-thirty her mother passed her door. It was ajar and a bedroom light was lighted. Mrs. Arton opened the door to say good night to Eunice. But the girl was not there."

He stared at us. "That's all. There is so much hysteria in the air now, that Mr. Arton was frightened and called upon the police at once. The Artons have been telephoning to everyone they know. It isn't like Eunice to slip out at night—or is it, Jane?"

"No," said Jane soberly. "And she's gone? They didn't hear any sound from her?" A strange, frightened hush came upon Jane's voice. "She didn't—scream from her bedroom? Anything like that?"
"No, he said not. Jane, dear, you're thinking more horrible things. She'll be found in the morning, visiting some neighbor or something of the kind."

But she was not found. Bermuda is a small place. The islands are so narrow that the ocean on both sides is visible from almost everywhere. It is only some twelve miles from St. Georges to Hamilton, and another twelve miles puts one in remote Somerset. By noon of the next day it was obvious that Eunice Arton was quite definitely missing.

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This next day was May 15th--the first of the real terror brought by the White Invaders. But we did not call them that yet; they were still the "ghosts." Bermuda was seething with terror. Every police station was deluged with reports of the ghostly apparitions. The white figures of men--in many instances, several figures together--had been seen during the night in every part of the islands. A little band of wraiths had marched down the deserted main street of Hamilton. It was nearly dawn. A few colored men, three or four roistering visitors, and two policemen had seen them. They had appeared down at the docks and had marched up the slope of the main street.

The stories of eye-witnesses to any strange event always are contradictory. Some said this band of ghostly men marched on the street level; others said they were below it, walking with only their heads above the road surface and gradually descending. In any event the frightened group of onlookers scattered and shouted until the whole little street was aroused. But by then the ghosts had vanished.

There were tales of prowlers around houses. Dogs barked in the night, frantic with excitement, and then shivered with terror, fearful of what they could sense but not see.

In Hamilton harbor, moored at its dock, was a liner ready to leave for New York. The deck watch saw ghosts walking apparently in mid-air over the moonlit bay, and claimed that he saw the white figure of a man pass through the solid hull-plates of the ship. At the Gibbs Hill Lighthouse other apparitions were seen; and the St. David Islanders saw a group of distant figures seemingly a hundred feet or more beneath the beach--a group, heedless of being observed; busy with some activity; dragging some apparatus, it seemed. They pulled and tugged at it, moving it along with them until they were lost to sight, faded in the arriving dawn and blurred by the white line of breakers on the beach over them.

The tales differed materially in details. But nearly all mentioned the dark helmets of strange design, the white, tightly fitting garments, and many described the dark thread-like wires looped along the arms and legs, running up into the helmet, and back across the chest to converge at the belt where there was a clock-like dial-face.

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The ghostly visitors seemed not aggressive. But Eunice Arton was missing; and by noon of May 15th it was apparent that several other white girls had also vanished. All of them were under twenty, all of prominent Bermuda families, and all of exceptional beauty.

By this time the little government was in chaos. The newspapers, by government order, were suppressed. The cable station voluntarily refused to send press dispatches to the outside world. Don, Jane and I, through Mr. Dorrance's prominence, had all the reports; but to the public it was only known by whispered, garbled rumor. A panic was impending. The New York liner, that morning of May 15th, was booked beyond capacity. An English ship, anchored out in the open channel outside Hamilton harbor, received passengers up to its limit and sailed.

The shops of St. Georges and Hamilton did not open that morning of May 15th. People gathered in the streets--groups of whites and blacks--trying to learn what they could, and each adding his own real or fancied narrative to the chaos.

Although there had seemed so far no aggression from the ghosts--our own encounter with the apparition being typical of them all--shortly after noon of the 15th we learned of an event which changed the whole aspect of the affair; an event sinister beyond any which had gone before. It had occurred in one of the hotels near Hamilton the previous night and had been suppressed until now.

A young woman tourist, living alone in the hotel, had occupied a bedroom on the lower floor. The storm blinds and windows were open. During the night she had screamed. Guests in nearby rooms heard her cries, and they were also conscious of a turmoil in the woman's room. Her door was locked on the inside, and when the night clerk finally arrived with a pass-key and they entered, they found the room disordered, a wicker chair and table overturned, and the young woman gone, presumably out of the window. She had been a woman of about twenty-five, a widow, exceptionally attractive.

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Stolen by the ghosts? We could think of nothing else. Was that what had happened to Eunice Arton? Did that explain the reported disappearances of the several other girls? Did this ghostly activity have some rational purpose--the stealing of young white women, all of them of unusual beauty? The conclusion was forced upon us, and with it the whole affair took on a complexion shudderingly sinister. It was not a mere panic of the people with which
Bermuda now had to cope—not merely an unexplainable supernatural visitation, harmless enough, save that it was terrorizing. This was a menace. Something which had to be met with action.

It would be futile for me to attempt detailing the events of that chaotic day. We had all ridden over to Hamilton and spent the day there, with the little town in a turmoil and events seething around us—a seemingly endless stream of reports of what had happened the night before. By daylight no apparitions were seen. But another night was coming. I recall with an inward sinking of heart I saw the afternoon sun lowering, the sky-blue waters of the bay deepening into purple and the chalk-white little stone houses taking on the gray cast of twilight. Another night was coming.

The government was making the best preparations it could. Every policeman of the island force was armed and ready to patrol through the night. The few soldiers of the garrisons at St. Georges and Hamilton were armed and ready. The police with bicycles were ready to ride all the roads. The half dozen garbage trucks—low-gear motor trucks—were given over to the soldiers for patrol use. The only other automobiles on the islands were those few permitted for the use of the physicians, and there were a few ambulance cars. All of these were turned over to the troops and the police for patrol.

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In the late afternoon an American newspaper hydroplane arrived from New York. It landed in the waters of Hamilton harbor and prepared to encircle the islands throughout the night. And the three or four steamship tenders and the little duty boat which supplied the government dockyards with daily provisions all had steam up, ready to patrol the island waters.

Yet it all seemed so futile against this unknown enemy. Ghosts? We could hardly think of them now as that. Throughout the chaotic day I recall so many wild things I had heard others say, and had myself thought. The dead come to life as living wraiths? A ghost could not materialize and kidnap a girl of flesh and blood. Or could it? Hysterical speculation! Or were these invaders from another planet?

Whatever their nature, they were enemies. That much we knew.

Night fell upon the crowded turmoil of the little city of Hamilton. The streets were thronged with excited, frightened people. The public park was jammed. The hotels and the restaurants were crowded. Groups of soldiers and police on bicycles with electric torches fastened to their handlebars were passing at intervals. Overhead the airplane, flying low, roared past every twenty minutes or so.

The night promised to be clear. The moon would rise, just beyond the full, a few hours after sunset. It was a warm and breathless night, with less wind than usual. Most of the people crowding the streets and the restaurants were in white linen—themselves suggesting the white and ghostly enemy.

* * * * *

Mr. Dorrance was occupied at the Government House. Jane, Don and I had supper in a restaurant on Queen Street. It was nearly eight o'clock and the crowd in the restaurant was thinning out. We were seated near the street entrance where large plate-glass windows displayed a variety of bakery products and confections. Jane had her back to the street, but Don and I were facing it. Crowds were constantly passing. It was near the end of our meal. I was gazing idly through one of the windows, watching the passing people when suddenly I became aware of a man standing out there gazing in at me. I think I have never had so startling a realization. It was a man in white doeskin trousers and blue blazer jacket, with a jaunty linen cap on his head. An abnormally tall, muscular man. And his smooth-shaven, black-browed face with the reflection from the restaurant window lights upon it, reminded me of the apparition we had seen the night before!

"Don! Don't look up! Don't move! Jane, don't look around!" I whispered, almost frantically.

I must have gone white for Don and Jane gaped at me in astonishment.

"Don't do that!" I murmured. "Someone outside, watching us!" I tried to smile, "Hot night, isn't it? Did you get a check, Don?" I looked around vaguely for the waitress, but out of the tail of my eyes I could see the fellow out there still peering in and staring intently at us.

"What is it?" I called. "Check, please. There's a man out there, Jane—we're crazy, but he does look like that ghost we saw on the Fort Beach."

If the fellow knew that we had spotted him he gave no sign. He was still apparently regarding the bakery display in the window, but watching us nevertheless. I was sure of that.
The waitress gave us our check. "Nine and six," Don smiled. "Thank you. But didn't you forget that last coffee?"

The colored girl added the extra sixpence, and left us.
"You think that's the same--I say, good Lord--"

Don was speechless. Jane had gone white. The fellow moved to the other window, and Jane had a swift look at him. We all recognized him, or thought we did. What necromancy was this? Had one of the apparitions materialized? Was that ghost we saw, this gigantic fellow in doeskins and blazer who looked like a tourist standing out there at the window? Were these ghosts merely human enemies after all?

The idea was at once terrifying, and yet reassuring. This was a man with whom we could cope with normal tactics. My hand went to the pocket of my blazer where I had a little revolver. Both Don and I were armed--permits for the carrying of concealed weapons had been issued to us this same day.

I murmured, "Jane! There are the Blakinsons over there. Go join them. We'll be back presently."

"What are you going to do?" Don demanded.
"Go out and tackle him--shall we? Have a talk. Find out who he is."
"No!" Jane protested.
"Why not? Don't you worry, Jane. Right here in the public street--and we're both armed. He's only a man."

But was he only a man?

"We'll have a go at it," said Don abruptly. He rose from his seat. "Come on, Jane, I'll take you to the Blakinsons."

"Hurry it up!" I said. "He's leaving! We'll lose him!"

The fellow seemed about to wander on along the street. Don brought Jane over to the Blakinsons' table which was at the back of the restaurant. We left our check with her and dashed for the street.

"Where is he? Do you see him?" Don demanded.

He had gone. But in a moment we saw him, his white cap towering above the crowd down by the drugstore at the corner.

"Come on, Don! There he is!"

We half ran through the crowd. We caught the fellow as he was diagonally crossing the street. We rushed up, one on each side of him, and seized him by the arms.

CHAPTER III

Tako, the Mysterious

The fellow towered head and shoulders over Don, and almost that over me. He stared down at us, his jaw dropping with surprise. My heart was pounding; to me there was no doubt about it now; this heavy-featured handsome, but evil face was the face of the apparition at whom Don had fired as it hung in the air over the Fort Beach path. But this was a man. His arm, as I clutched it, was musccularly solid beneath the sleeve of his flannel jacket.

"I say," Don panted. "Just a minute."

With a sweep of his arms the stranger angrily flung off our hold.

"What do you want?"

I saw, within twenty feet of us, a policeman standing in the street intersection.

"I beg your pardon," Don stammered. We had had no time to plan anything. I put in:

"We thought you were a friend of ours. This night--so much excitement--let's get back to the curb."

We drew the man to the sidewalk as a physician's little automobile with two soldiers in it waded its way slowly through the crowd.

The man laughed. "It is an exciting night. I never have seen Bermuda like this before."

Swift impressions flooded me. The fellow surely must recognize us as we did him. He was pretending friendliness. I noticed that though he seemed not over forty, his close-clipped hair beneath the white linen cap was silver white. His face had a strange pallor, not the pallor of ill health, but seemingly a natural lack of color. And his voice, speaking good English, nevertheless marked him for a foreigner--though of what nation certainly I could not say.

"We're mistaken," said Don. "But you look like someone we know."

"Do I, indeed? That is interesting."

"Only you're taller," I said. "You're not a Bermudian, are you?"

His eyes, beneath the heavy black brows shot me a look. "No. I am a stranger; a visitor. My name----"

He hesitated briefly; then he smiled with what seemed an amused irony. "My name is Tako. Robert Tako. I am
living at the Hamiltonia Hotel. Does that satisfy you?"
I could think of nothing to say. Nor could Don. The fellow added, "Bermuda is like a little ship. I understand
your inquisitiveness--one must know everyone else. And who are you?"
Don told him.
"Ah, yes," he smiled. "And so you are a native Bermudian?"
"Yes."
"And you," he said to me, "you are American?"
"From New York, yes."
"That is more interesting. Never have I known an American. You are familiar with New York City?"
"Of course. I was born there."
His contemplative gaze made me shiver. I wondered what Don was planning as an outcome to this. The fellow
seemed wholly at ease now. He was lounging against the drug store window with us before him. My eyes were level
with the negligee collar of his blue linen shirt, and abruptly I was galvanized into alertness. Just above the soft collar
where his movements had crushed it down I saw unmistakably the loop of a tiny black thread of wire projecting
upward! Conclusive proof! This was one of the mysterious enemies! One of the apparitions which had thrown all
Bermuda into a turmoil stood materialized here before us.
I think that Don had already seen the wire. The fellow was saying nonchalantly,
"And you, Mr. Livingston--are you also familiar with New York City?"
"Yes," said Don. He had gone pale and tight-lipped. I caught his warning glance to me. "Yes," he repeated. "I
lived there several years."
"I would like to know you two better. Much better--but not tonight."
He moved as though to take his leave of us. Then he added to Don, "That most beautiful young lady with you
in the restaurant--did I not see you there? Is that your sister?"
Don made his decision. He said abruptly, "That's none of your business."
It took the fellow wholly by surprise. "But listen--"
"I've had enough of your insolence," Don shouted."
Don's hand made an instinctive movement toward his belt, but I seized his wrist. And I added my loud
voice to Don's. "No, you don't!"
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A group of onlookers was at once collecting around us. The giant tried to cast me off, but I clung to him with
all my strength. And suddenly we were struggling to keep the fellow from breaking away from us. He muttered a
strange-sounding oath.
"Let me go! You fools!"
"Not such fools," Don shouted. "Officer! I say--officer!"
Don's revolver was in his hand; people were pressing around us, but when they saw the revolver they began
scattering. The giant made a lunge and broke away from us, heedless that Don might have shot him.
"What's all this? I say, you three, what are you up to?"
The policeman came on a run. A group of soldiers passing on bicycles, flung the machines aside and came
dashing at us. The giant stood suddenly docile.
"Officer, these young men attacked me."
"He's a liar!" Don shouted. "Watch him! He might be armed--don't let him get away from you!"
The law surrounded us. "Here's my weapon," said Don. "Bob, give up your revolver."
In the turmoil Don plucked the policeman aside.
"I'm nephew of the Honorable Arthur Dorrance. Take us to your chief. I made that uproar to catch that big
fellow."
The name of the Honorable Arthur Dorrance was magic. The policeman stared at our giant captive who now
was surrounded by the soldiers.
"But I say--"
"Take us all in and send for Mr. Dorrance. He's at the Government House."
"But I say--That big blighter--"
"We think he's one of the ghosts!" Don whispered.
"Oh, my Gawd!"
With the crowd following us we were hurried away to the police station nearby.
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The sergeant said, "The Chief will be here in a few minutes. And we've sent for Mr. Dorrance."
"Good enough, Brown." It chanced that Don knew this sergeant very well. "Did you search the fellow?"
"Yes. No weapon in his clothes."
I whispered, "I saw a wire under his collar."
"Sh! No use telling that now, Bob."
I realized it. These policemen were frightened enough at our captive. Don added, "Before my uncle and the Chief arrive, let me have a talk with that fellow, will you?"
They had locked him up; and in the excitement of our arrival at the station both Don and I had completely forgotten the wire we had seen at his collar. But we remembered it now, and the same thought occurred to both of us. We had locked up this mysterious enemy, but would the prison bars hold him?
"Good Lord!" Don exclaimed. "Bob, those wires--Sergeant, we shouldn't have left that fellow alone! Is he alone! Come on!"
With the frightened mystified sergeant leading us we dashed along the little white corridor to the windowless cell in which the giant was confined. At the cell-door a group of soldiers lounged in the corridor.
"Smooth talker, that fellow."
"Gor blimey, who is he?"
We arrived with a rush. "Is he in there?" Don shouted. "Open the door, you fellows! See here, you watch him--we've got to get his clothes off. He's got some mechanism--wires and things underneath his clothes!"
"Get out of the way!" ordered the sergeant. "I'll open it!"
There was silence from behind the door. The prisoner had been in the cell no more than a minute or two.

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We burst open the door. The cell was dimly illumined. The figure of the giant stood backed in its further corner. But at the sight of him we all stood transfixed with horror. His shoes, trousers, shirt, jacket and cap lay in a little pile at his feet. He stood revealed in the short tight-fitting silvery garments. The wires were looped about his arms and legs and he had pulled a mesh of them over his head in lieu of a helmet.
He stood regarding us sardonically. And in that instant while we were stricken with the shock of it, I saw that the figure was fading. It was a solid human form no longer! A silvery cast had come upon it. Another second passed; it was visibly growing tenuous, wraithlike! It was melting while we stared at it, until in that breathless instant I realized that the wall behind it was showing through.
A wraith! An apparition! The vision of a ghost standing there, leering at us!
The soldiers had retreated back into the corridor behind us. The sergeant gripped me, and his other hand, wavering with fright, clutched a revolver.
"But it's--it's going!"
Don gasped, "Too late! Sergeant, give me that gun!"
"Wait!" I shouted. "Don't shoot at it!"
The shimmering glowing white figure was slowly moving downward as though floating through the cell-floor. Its own invisible surface was evidently not here but lower down, and it was beginning to drop. I don't know what frenzied courage--if courage it could be called--was inspiring me. I was wholly confused, but nevertheless I struck Don and the sergeant aside and rushed at the thing.

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It was a sensation most horrible. From the waist up it was still above the floor of the cell. My wildly flailing arms went through the chest! But I felt nothing. It was not even like waving aside a mist. There was nothing. I saw my solid fist plunge through the leering ghostly face. I fought wildly, with a panic upon me, against the glowing phosphorescent nothingness of the apparition. My feet were stamping on its chest and shoulders. Then, as it sank lower, only the grinning face was down there.
Panting, and with the cold sweat of horror upon me, I felt Don shoving me aside.
"Too late!"
And then the sergeant's shot rang out. The bullet clattered against the solid stone floor of the cell. The acrid smoke of the powder rolled over us; and cleared in a moment to show us the apparition several feet below the floor level. It seemed to strike its solidity of ground. I saw it fall the last little distance with a rush; land, and pick itself up.
And with a last sardonic grin upward at us, the dim white figure ran. Dwindling smaller, dimmer, until in a moment it was gone into the Unknown.
As though a light had struck upon me came the realization.
"Don, this is rational, this thing! Some strange science!"
All day we had been vaguely realizing it. Intangible, but rational enemies were stealing white girls of Bermuda. Invaders from another planet? We had thought it might be that. Certainly it was nothing supernatural. These was not ghosts.
But now came a new realization. "Don! That's another world down there! Another realm! The fourth
dimension—that's what it is! These things everybody's calling ghosts—it's the fourth dimension, Don! People of the fourth dimension coming out to attack us!"

And already the real menace had come! At that moment, half a mile away across the harbor on the slope of the little hill in Paget, an army of the White Invaders suddenly materialized, with dull, phosphorescent-green light-beams flashing around the countryside, melting trees and vegetation and people into nothingness!

The attack upon Bermuda had begun!

CHAPTER IV

Ambushed!

The events which I have now to describe are world history, and have been written in many forms and by many observers. I must, however, sketch them in broadest outline for the continuity of this personal narrative of the parts played by my friends and myself in the dire and astounding affair which was soon to bring chaos, not only to little Bermuda but to the great United States as well, and a near panic everywhere in the world.

On this evening of May 15th, 1938, the White Invaders showed themselves for the first time as rational human enemies. The residential suburb of Paget lies across the little harbor from the city of Hamilton. It is a mile or so by road around the bay, and a few minutes across the water by ferry. The island in the Paget section is a mere strip of land less than half a mile wide in most places, with the sheltered waters of the harbor on one side, and the open Atlantic with a magnificent pink-white beach on the other. The two are divided by a razor-back ridge—a line of little hills a hundred feet or so high, with narrow white roads and white stone residences set on the hill-slopes amid spacious lawns and tropical gardens; and with several lavish hotels on the bay shore, and others over the ridge, fronting the beach.

The invaders landed on the top of the ridge. It seemed that, without warning, a group of white-clad men were in a cedar grove up there. They spread out, running along the roads. They seemed carrying small hand-weapons from which phosphorescent-green light-beams flashed into the night.

The first reports were chaotic. A few survivors appeared in Hamilton who claimed to have been very close to the enemy. But for the most part the descriptions came from those who had fled when still a mile or more away. The news spread as though upon the wings of a gale. Within an hour the hotels were emptied; the houses all along the shore and the bayside hill-slope were deserted by their occupants. Boats over there brought the excited people into Hamilton until no more boats were available. Others came madly driving around the harbor road, on bicycles, and on foot—and still others escaped toward distant Somerset.

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A thousand people or more came in within that hour. But there were others who did not come—those who were living in the score or two of houses up on the ridge in the immediate neighborhood of where the invaders appeared....

Don and I met Mr. Dorrance at the police station within a few minutes after the news of the Paget attack reached us. We hurried back to the restaurant and found Jane still there with the Blakinsons. Ten minutes later we were all in the Government House, receiving the most authentic reports available.

From the windows of the second floor room where Mr. Dorrance sat with a number of the officials, Don, Jane, and I could see across the harbor and to the ridge where the enemy was operating. It was not much over two miles from us. The huge, slightly flattened moon had risen. The bay and the distant little hills were flooded with its light. We could see, off on the ridge-top, the tiny flashing green beams. But there was no sound save the turmoil of the excited little city around us.

"They don't seem to be moving," Don murmured. "They're right where they were first reported."

It seemed as though the small group of light-beams, darting back and forth, nevertheless originated from one unshifting place. The beams, we realized, must be extremely intense to be visible even these two miles or so, for we could see that they were very small and of very short range—more like a hand-flashlight than anything else. How many of the enemy were there? They were men, we understood: solid, human men garbed in the fashion of the apparitions which had been so widely seen.

The patrolling airplane, connected with us here by wireless telephone, gave us further details. There seemed to be some fifty of the invaders. They stood in a group in what had been a small cedar grove. It was a barren field now; the trees had melted and vanished before the silent blasts of the green light-beams. They had, these beams, seemingly a range of under a hundred feet. The invaders had, at first, run with them along the nearby roads and attacked the nearest houses. Part of those houses were still standing, save for the wooden portion of them which had vanished into nothingness as the green light touched it. The people, too, were annihilated. The airplane pilot had seen a man running near the field trying to escape. The light touched him, clung to him for a moment. There was an instant as he fell that he seemed melting into a ghostly figure; and then he was gone.

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Fifty invaders. But they were human; they could be attacked. When they first appeared, the nature of them still unrealized, a physician's automobile, manned by three soldiers, had been coming along the bay road at the foot of the ridge. The soldiers turned it into a cross road and mounted the hill. Two of them left it, scouting to see what was happening; the other stayed in the car. One of the enemy suddenly appeared. His ray struck the car. Its tires, its woodwork, and fabric and cushions melted and vanished, and the man within it likewise disappeared. Everything organic vanished under the assailing green beam. The other two soldiers fired at the attacker. He was human. He fell as their bullets struck him. Then others of his fellows came running. The two soldiers were driven away, but they escaped to tell of the encounter.

The airplane pilot, half an hour later, flew low and fired down into the group of enemy figures. He thought that one of them fell. He also thought he was out of range of their beams. But a pencil-point of the green light thinned and lengthened out. It darted up to his hundred-and-fifty-foot altitude and caught one of his wings. The plane fell disabled into the bay near the city docks, but the pilot swam safely ashore.

I need not detail the confusion and panic of the government officials who were gathered here in the room where Don, Jane and I stood watching and listening to the excitement of the incoming reports. For quiet little Bermuda the unprecedented situation was doubly frightening. An attack would have to be made upon the invaders. There were only fifty of the enemy; the soldiers and the police could in a few hours be mobilized to rush them and kill them all.

But could that be done? The thing had so many weird aspects, the invaders still seemed so much in the nature of the supernatural, that Mr. Dorrance advised caution. The enemy was now--this was about ten o'clock in the evening--quietly gathered in the little field on the ridge-top. They seemed, with their first attack over, no longer offensive. But, if assailed, who could say what they would do?

And a thousand unprecedented things to do were pressing upon the harassed officials. Panic-stricken crowds now surged out of all control in the Hamilton streets. Refugees were coming in, homeless, needing care. The soldiers and the police were scattered throughout the islands, without orders of what to do to meet these new conditions.

And more and more frightening reports poured in. The telephone service, which links as a local call nearly every house throughout the islands, was flooded with frantic activity. From nearly every parish came reports of half-materialized ghosts. Fifty invaders? There were that many gathered on the Paget hill, but it seemed that there must be a thousand watching apparitions scattered throughout the islands. Harmless, merely frightening, wraiths. But if that little group in Paget were assailed, this other thousand might in a moment cease to be harmless "ghosts."

The astounded Bermuda officials were forced now to accept the realization that this was solid science. Incredible, fantastic, unbelievable--yet here it was upon us. Some unknown, invisible realm co-existed here in this same space. Its inhabitants had found a way to come out.

The government wireless, and the Canadian cables, could no longer withhold such news as this. Bermuda appealed now to Washington and to London for help. Warships would be coming shortly. Passenger liners on the high seas bringing holiday visitors, were turned aside. The ships in the port of New York would not sail for Bermuda tomorrow.

I think that the outside world would have had jeering publics amused at little Bermuda hysterical over a fancied attack from the fabled fourth dimension. But by midnight this night, the United States at least was in no mood for jeering. A message came--reaching us soon after eleven o'clock, Bermuda time--by cable, through Halifax from Washington. The thing already had passed beyond the scope of the Bermudas. White apparitions were seen on the Atlantic seaboard near Savannah. And then at Charleston; and throughout the night at several other points farther north. None materialized into solidity. But the "ghosts" were seen, appearing, vanishing, and reappearing always farther north.

It was a world menace!

At about midnight Mr. Dorrance joined Jane, Don and me where we stood by the Government House windows watching the distant motionless group of enemy lights. He was pale and harassed.

"No use for you to stay here," he told us. "Don, you and Bob take Jane home. It's the safest place now."

The reports seemed to indicate that of all the parishes, St. Georges was now most free of the apparitions.

"Go home," he insisted. "You and Bob stay with Jane. Take care of her, lads." He smiled grimly. "We--all the government--may be moving to St. Georges by morning."

"But, father," Jane protested, "what will you do? Stay here?"

"For a while. I'll drive over by daybreak. I'll keep the Victoria. You have your cycles; you three ride over. Be careful, lads. You have your revolvers?"

"Yes," said Don.
We had no time for leave-taking. He was at once called away from us.

We left the Government House shortly after that, got our bicycles and started for the north shore road. Government Hill, where the road climbed through a deep cut in the solid rock, was thronged with carriages, and with cyclists walking up the hill. Most of the traffic was going in one direction--refugees leaving this proximity to the enemy.

We reached the top of the hill, mounted and began the long coast down. In an hour and a half or less we would be home.... Ah, if one could only lift the veil which hides even the immediate future, upon the brink of which we must always stand unseeing!

The north-shore road had the rocky seacoast upon our left--calm moonlit ocean across which in this direction lay the Carolinas some seven hundred miles away. We had gone, perhaps three miles from Hamilton. The road was less crowded here. A group of apparitions had been seen in the neighborhood of the Aquarium, which was ahead of us, and most of the refugees were taking the middle road along Harrington Sound in the center of the island.

But we decided to continue straight on. It was shorter.

And there will be more police along here," Don reasoned.

Heaven knows we did not feel in immediate danger. Cycling soldiers passed us at frequent intervals, giving us the news of what lay ahead. And we both had revolvers.

* * * * *

We came presently to the bottom of one of the many steep little hills up which it is difficult to ride. We were walking up the grade, pushing our machines with Jane between us. A group of soldiers came coasting down the hill, but when we were half-way up they had passed out of sight. It chanced at the moment that we were alone on the road. No house was near us. The ocean to our left lay at the bottom of a fifty-foot rocky cliff; to the right was a thick line of oleander trees, heavy with bloom.

Ahead of us, to the right within the line of oleanders, the glowing white figure of an apparition was visible. We stopped, out of breath from the climb, and stood by the roadside.

"See it there?" Don murmured. "Let's wait and watch it a moment."

One may get used to anything. We were not frightened. The figure, no more than twenty feet ahead of us, stood partly within a tree-trunk. It could not materialize there. It was the figure of a man, with helmet and looped wires.

"Not that fellow who called himself Tako," I whispered.

This one was smaller, no larger than Jane, perhaps. He raised his arms as though warning us to stop. We stood gazing at him, undecided whether to retreat or advance. An omnibus carriage coming from St. Georges stopped at the brow of the hill. Its occupants climbed out and began shouting at the apparition, at the same time flinging stones, one of which came bounding past us.

"Hi!" I called. "Stop that! No sense to that!"

* * * * *

Suddenly I heard a rustling of the oleanders at my side. We had no warning; our attention was wholly upon the apparition and the men by the carriage on the brow of the hill flinging stones. There was a rustling; the shadowed oleanders parted and figures leaped upon us!

I recall hearing Don shout, and Jane cry out. Our cycles clattered to the road. I fired at an oncoming white figure, but missed. The solid form of a man struck me and I went down, tangled in my wheel. There was an instant when I was conscious of fighting madly with a human antagonist. I was conscious of Don fighting, too. Jane stood, gripped by a man. Four or five of them had leaped upon us.

I had many instant impressions; then as I fought something struck my head and I faded into insensibility. I must have recovered within a moment. I was lying on the ground, partly upon a bicycle.

Don was lying near me. White figures of men with Jane in their midst were standing off the road, partly behind the bushes. They were holding her, and one of them was swiftly adjusting a network of wires upon her. Then, as I revived further, I heard shouts; people were arriving from down the hill. I tried to struggle to my feet, but fell back.

In the bushes the figures--and the figure of Jane--were turning silvery; fading into wraiths. They drifted down into the ground. They were gone.

CHAPTER V
Into the Enemy Camp

"But Bob, I won't go back to Government House," Don whispered. "Lord, we can't do that--get in for theories and questions and plans to gather a police squad. Every minute counts."

"What can we do?"

"Break away from these fellows--send Uncle Arthur a message--anything at all; and say we'll be back in half an hour. I tell you, Jane is gone--they've got her. You saw them take her. By now probably, they've got her off there in Paget among them. We've got to do something drastic, and do it now. If the police attacked--suppose Jane is in that
Paget group--the first thing they'd do when the police came at them would be to kill her. We can't go at it that way, I tell you."

We were trudging back up Government Hill with a group of soldiers around us. I had revived to find myself not seriously injured; a lump was on my head and a scalp wound where something had struck me. Don had regained consciousness a moment later and was wholly unharmed. His experience had been different from mine. Two men had seized him. He was aware of a sudden puff of an acrid gas in his face, and his senses had faded. But when they returned he had his full strength almost at once.

We realized what had happened. Half a dozen of the enemy were lying in ambush there on the roadside. It was young white girls they were after, and when we appeared with Jane, one of the invaders showed himself as an apparition to stop us, and then the others, fully materialized and hiding in the oleanders, had leaped upon us. They had had only time to escape with Jane, ignoring Don and me where we had fallen. They seemed also not aware of the nature of our weapons for they had not taken our revolvers.

* * * * *

Had they gone now with Jane into the other realm of the Unknown? Or was she with them, over in Paget now in the little enemy camp there which was defying Bermuda? We thought very possibly it was the latter. The giant who had called himself Tako, who had escaped us in the Police Station, had been driven from our minds by all the excitement which followed. Was that Tako the leader of these invaders? Had he, for some time perhaps, been living as he said in the Hamiltonia Hotel? Scouting around Bermuda, selecting the young girls whom his cohorts were to abduct?

The thoughts made us shudder. He had noticed Jane. He it was, doubtless, who as an apparition had prowled outside Jane's room the night before last. And last night he had followed us to the Fort Beach. And again to-night in the restaurant he had been watching Jane. These men who had captured Jane now might very well carry her to Paget and hand her over to their leader, this giant Tako.

A frenzy of desperation was upon Don and me at the thought.
"But what shall we do?" I whispered.
"Get away from these soldiers, Bob. We've got our revolvers. We'll ride over there to Paget--just the two of us. It's our best chance that way. Creep up and see what's over there. And if Jane is there, we've got to get her, Bob--get her some way, somehow."

We could plan no further than that. But to return to Government House, to face Jane's father with the tale of what had happened, and then become involved in an official attempt to attack with open hostilities the enemy in Paget--that was unthinkable.

* * * * *

At the foot of Government Hill, with a trumped-up excuse, Don got us away from our escort. The night was far darker now; a gray-white mass of clouds had come up to obscure the moon. We cycled through the outskirts of Hamilton to the harbor road and followed it around the marshy end of the bay and into Paget. There had been at first many vehicles coming in from the beach, but when we passed the intersection and nothing lay ahead of us but the Paget ridge we found the road deserted.

We had had our handle-bar flash-lights turned on, but now we shut them off, riding slowly into the darkness. Don presently dismounted.
"Better leave our wheels here."
"Yes."

We laid them on the ground in a little roadside banana patch. We were no more than a quarter of a mile from the enemy now; the glow of their green beams standing up into the air showed on the ridge-top ahead of us.
"We'll take the uproad," Don whispered. "Shall we? And when we get to the top, follow some path, instead of a road."
"All right," I agreed.

We started on foot up the steep side road which led from the bay shore to the summit of the ridge. The houses here were all dark and deserted, their occupants long since having fled to Hamilton. It was enemy country here now.

We reached the summit and plunged into a cedar grove which had a footpath through it. The green light-beams seemed very close; we could see them in a little group standing motionless up into the darkness of the sky.
"Can't plan," Don whispered. "But we must keep together. Get up as close as we can and see what conditions are."

And see if Jane were here.... It echoed through my head, and I knew it was also Don's guiding thought.

* * * * *

Another ten minutes. We were advancing with the utmost caution. The cedar grove was almost black. Then we came to the end of it. There was a winding road and two white houses a hundred feet or so apart. And beyond the
houses was a stretch of open field, strangely denuded of vegetation.

"There they are, Bob!" Don sank to the ground with me beside him. We crouched, revolvers in hand, gazing at the strange scene. The field had been a cedar grove, but all the vegetation now was gone, leaving only the thin layer of soil and the outcropping patches of Bermuda's famous blue-gray rock. The houses, too, had been blasted. One was on this side of the field, quite near us. Its walls and roof had partially fallen; its windows and door rectangles yawned black and empty, with the hurricane shutters and the wooden window casements gone and the panes shattered into a litter of broken glass.

But the house held our attention only a moment. Across the two-hundred-foot field we could plainly see the invaders--forty or fifty men's figures dispersed in a little group. It seemed a sort of encampment. The green light beams seemed emanating from small hand projectors resting now on the ground. The sheen from them gave a dull lurid-green cast to the scene. The men were sitting about in small groups. And some were moving around, seemingly assembling larger apparatus. We saw a projector, a cylindrical affair, which half a dozen of them were dragging.

"Bob! Can you make out--back by the banana grove--captives? Look!"

"* * * * *"

The encampment was at the further corner of the naked field. A little banana grove joined it. We could see where the enemy light had struck, partially melting off some of the trees so that now they stood leprous. In the grove were other figures of men, and it seemed that among them were some girls. Was Jane there among those captives?

"We've got to get closer," I whispered. "Don, that second house--if we could circle around and get there. From the corner of it, we'd be hidden."

"We'll try it."

The farther house was also in ruins. It stood near the back edge of the naked field and was within fifty feet of the banana grove. We circled back, and within ten minutes more were up against the broken front veranda of the house.

"No one here," Don whispered.

"No, evidently not."

"Let's try getting around the back and see them from the back corner."

We were close enough now to hear the voices in the banana grove. The half-wrecked house against which we crouched was a litter of stones and broken glass. It was black and silent inside.

"Don, look!"

Sidewise across the broken veranda the group of figures in the field were partly visible. We saw ghostly wraiths now among them--apparitions three or four feet above the ground. They solidified and dropped to earth, with their comrades gathering over them. The babble of voices in a strange tongue reached us. New arrivals materializing!

But was Jane here? And Tako, the giant? We had seen nothing of either of them. These men seemed all undersized rather than gigantic. We were about to start around the corner of the veranda for a closer view of the figures in the grove, when a sound near at hand froze us. A murmur of voices! Men within the house!

"* * * * *"

I pulled Don flat to the ground against the stone steps of the porch. We heard voices; then footsteps. A little green glow of light appeared. We could see over the porch floor into the black yawning door rectangle. Two men were moving around in the lower front room, and the radiation from their green lights showed them plainly. They were small fellows in white, tight-fitting garments, with the black helmet and the looped wires.

"Don, when they come out--" I murmured it against his ear. "If we could strike them down without raising an alarm, and get those suits--"

"Quiet! They're coming!"

They extinguished their light. They came down the front steps, and as they reached the ground and turned aside Don and I rose up in the shadows and struck at them desperately with the handles of our revolvers. Don's man fell silently. Mine was able to ward off the blow; he whirled and flashed on his little light. But the beam missed me as I bent under it and seized him around the middle, reaching up with a hand for his mouth. Then Don came at us, and under his silent blow my antagonist wilted.

We had made only a slight noise; there seemed no alarm.

"Get them into the house," Don murmured. "Inside; someone may come any minute."

We dragged them into the dark and littered lower room. We still had our revolvers, and now I had the small hand-projector of the green light-beam. It was a strangely weightless little cylinder, with a firing mechanism which I had no idea how to operate.

In a moment we had stripped our unconscious captives of their white woven garments. In the darkness we were hopelessly ruining the mechanism of wires and dials. But we did not know how to operate the mechanism in any event; and our plan was only to garb ourselves like the enemy. Thus disguised, with the helmets on our heads, we
could get closer, creep among them and perhaps find Jane....

The woven garments which I had thought metal, stretched like rubber and were curiously light in weight. I got the impression now that the garments, these wires and disks, the helmet and the belt with its dial-face—all this strange mechanism and even the green-ray projector weapon—all of it was organic substance. And this afterward proved to be the fact.[1]

[1] As we later learned, the scientific mechanism by which the transition was made from the realm of the fourth dimension to our own earthly world and back again, was only effective to transport organic substances. The green light-beam was of similar limitation. An organic substance of our world upon which it struck was changed in vibration rate and space-time co-ordinates to coincide with the characteristics with which the light-current was endowed. Thus the invaders used their beams as a weapon. The light flung whatever it touched of organic material with horrible speed of transition away into the Unknown—to the fourth, fifth, or perhaps still other realms. In effect—annihilation.

The mechanism of wires and dials (and small disks which were storage batteries of the strange current) was of slower, more controllable operation. Thus it could be used for transportation—for space-time traveling, as Earth scientists later came to call it. The invaders, wearing this mechanism, materialized at will into the state of matter existing in our world—and by a reversal of the co-ordinates of the current, dematerialized into the more tenuous state of their own realm.

We were soon disrobed and garbed in the white suits of our enemies. The jacket and trunks stretched like rubber to fit us.

"Can't hope to get the wires right," Don whispered. "Got your helmet?"

"Yes. The belt fastens behind, Don."

"I know. These accursed little disks, what are they?"

We did not know them for storage batteries as yet. They were thin flat circles of flexible material with a cut in them so that we could spring the edges apart and clasp them like bracelets at intervals on our arms and legs. The wires connected them, looped up to the helmet, and down to the broad belt where there was an indicator-dial in the middle of the front.[2]

[2] We were soon to learn also that they were bringing into our world weapons, food, clothing and a variety of equipment by encasing the articles in containers operated by these same mechanisms of wires carrying the transition current. The transportation was possible because all the articles they brought with them were of organic substance.

* * * * *

We worked swiftly and got the apparatus on somehow. The wires, broken and awry, would not be noticed in the darkness.

"Ready, Don?"

"Yes. I--I guess so."

"I've got this light cylinder, but we don't know how to work it."

"Carry it openly in your hand. It adds to the disguise." There was a note of triumph in Don's voice. "It's dark out there—only the green glow. We'll pass for them, Bob, at a little distance anyway. Come on."

We started out of the room. "You can hide your revolver in the belt—there seems to be a pouch."

"Yes."

We passed noiselessly to the veranda. Over our bare feet we were wearing a sort of woven buskin which fastened with wires to the ankle disks.

"Keep together," Don whispered. "Take it slowly, but walk openly—no hesitation."

My heart was pounding, seemingly in my throat, half-smothering me. "Around the back corner of the house," I whispered. "Then into the banana grove. Straighten."

"Yes. But not right among them. A little off to one side, passing by as though we were on some errand."

"If they spot us?"

"Open fire. Cut and run for it. All we can do, Bob."

Side by side we walked slowly along the edge of the house. At the back corner, the small banana grove opened before us. Twenty feet away, under the spreading green leaves of the trees a dozen or so men were working over apparatus. And in their center a group of captive girls sat huddled on the ground. Men were passing back and forth. At the edge of the trees, by the naked field, men seemed preparing to serve a meal. There was a bustle of activity everywhere; a babble of strange, subdued voices.

* * * * *

We were well under the trees now. Don, choosing our route, was leading us to pass within ten or fifteen feet of where the girls were sitting. It was dark here in the grove; the litter of rotted leaves on the soft ground scrunched and swished under our tread.
There was light over by the girls. I stared at their huddled forms; their white, terrified faces. Girls of Bermuda, all of them young, all exceptionally pretty. I thought I recognized Eunice Arton. But still it seemed that Jane was not here.... And I saw men seated watchfully near them--men with cylinder weapons in their hands.

Don occasionally would stoop, poking at the ground as though looking for something. He was heading us in a wide curve through the grove so that we were skirting the seated figures. We had already been seen, of course, but as yet no one heeded us. But every moment we expected the alarm to come. My revolver was in the pouch of my belt where I could quickly jerk it out. I brandished the useless light cylinder ostentatiously.

"Don!" I gripped him. We stopped under a banana tree, half hidden in its drooping leaves. "Don--more of them coming!"

Out in the empty field, apparitions of men were materializing. Then we heard a tread near us, and stiffened. I thought that we were discovered. A man passed close to us, heading in toward the girls. He saw us; he raised a hand palm outward with a gesture of greeting and we answered it.

* * * * *

For another two or three minutes we stood there, peering, searching for some sign of Jane.... Men were distributing food to the girls now.

And then we saw Jane! She was seated alone with her back against a banana tree, a little apart from the others. And near her was a seated man's figure, guarding her.

"Don! There she is! We can get near her! Keep on the way we were going. We must go in a wide curve to come up behind her."

We started forward again. We were both wildly excited; Jane was at the edge of the lighted area. We could come up behind her; shoot her guard; seize her and dash off.... I saw that the mesh of wires, disks and a helmet were on Jane....

Don suddenly stumbled over something on the ground. A man who had been lying there, asleep perhaps, rose up. We went sidewise, and passed him. But his voice followed us. Unintelligible, angry words.

"Keep on!" I murmured. "Don't turn!"

It was a tense moment. The loud words brought attention to us. Then there came what seemed a question from someone over by the girls. We could not answer it. Then two or three other men shouted at us. Don stopped, undecided.

"No!" I whispered. "Go ahead! Faster Don! It's darker ahead."

We started again. It seemed that all the camp was looking our way. Voices were shouting. Someone called a jibe and there was a burst of laughter. And from behind us came a man's voice, vaguely familiar, with a sharp imperative command.

Should we run? Could we escape now, or would a darting green beam strike us? And we were losing our chance for Jane.

Desperation was on me. "Faster, Don!"

The voice behind us grew more imperative. Then from nearby, two men came running at us. An uproar was beginning. We were discovered!

* * * * *

Don's revolver was out. It seemed suddenly that men were all around us. From behind a tree-trunk squarely ahead a figure appeared with leveled cylinder. The ground leaves were swishing behind us with swiftly advancing footsteps.

"Easy, Bob!"

Don found his wits. If he had not at that moment we would doubtless have been annihilated in another few seconds. "Bob, we're caught--don't shoot!"

I had flung away the cylinder and drawn my revolver; but Don shoved down my extended hand and held up his own hand.

"We're caught!" He shouted aloud. "Don't kill us! Don't kill us!"

It seemed that everywhere we looked was a leveled cylinder. I half turned at the running footsteps behind us. A man's voice called in English.

"Throw down your weapons! Down!"

Don cast his revolver away, and mine followed. I was aware that Jane had recognized Don's voice, and that she was on her feet staring in our direction with horrified eyes.

The man from behind pounced upon us. It was the giant, Tako.

"Well, my friends of the restaurant! The American who knows New York City so well! And the Bermudian! This is very much to my liking. You thought your jail would imprison me, did you not?"
He stood regarding us with his sardonic smile, while our captors surrounded us, searching our belts for other weapons. And he added, "I was garbed like you when we last met. Now you are garbed like me. How is that?"

They led us into the lighted area of the grove. "The American who knows New York City so well," Tako added. "And the Bermudian says he knows it also. It is what you would call an affair of luck, having you here."

He seemed highly pleased. He gazed at us smilingly. We stood silent while the men roughly stripped the broken wires and disks from us. They recognized the equipment. There was a jargon of argument in their strange guttural language. Then at Tako's command three of them started for the house.

Jane had cried out at sight of us. Her captor had ordered her back to her seat by the tree.

"So?" Tako commented. "You think silence is best? You are wise. I am glad you did not make us kill you just now. I am going to New York and you shall go with me; what you know of the city may be of help. We are through with Bermuda. There are not many girls here. But in the great United States I understand there are very many. You shall help us capture them."

Don began, "The girl over there----"

"Your sister? Your wife? Perhaps she knows something of New York and its girls also. We will keep her close with us. If you three choose to help me, you need have no fear of harm." He waved aside the men with imperious commands. "Come, we will join this girl of yours. She is very pretty, is she not? And like you--not cowardly. I have not been able to make her talk at all."

The dawn of this momentous night was at hand when, with the networks of wires and disks properly adjusted upon us, Tako took Jane, Don and me with him into the Fourth Dimension.

Strange transition! Strange and diabolical plot which now was unfolded to us! Strangely fantastic, weird journey from this Bermuda hilltop through the Unknown to the city of New York!

CHAPTER VI

The Attack upon New York

I must sketch now the main events following this night of May 15th and 16th as the outside world saw them. The frantic reports from Bermuda were forced into credibility by the appearance of apparitions at many points along the Atlantic seaboard of the southern States. They were sporadic appearances that night. No attacks were reported. But in all, at least a thousand wraith-like figures of men must have been seen. The visitations began at midnight and ended with dawn. To anyone, reading in the morning papers or hearing from the newscasters that "ghosts" were seen at Savannah, the thing had no significance. But in Washington, where officials took a summary of all the reports and attempted an analysis of them, one fact seemed clear. The wraiths were traveling northward. It could almost be fancied that this was an army, traveling in the borderland of the Unknown. Appearing momentarily as though coming out to scout around and see the contour and the characteristics of our realm; disappearing again into invisibility, to show themselves in an hour or so many miles farther north.

The reports indicated also that it was not one group of the enemy, but several--and all of them traveling northward. The most northerly group of them by dawn showed itself up near Cape Hatteras.

The news, when it was fully disseminated that next day, brought a mingling of derision and terror from the public. The world rang with the affair. Remote nations, feeling safe since nothing of the kind seemed menacing them, were amused that distant America, supposedly so scientifically modern, should be yielding to superstition worthy only of the Middle Ages. The accounts from Bermuda were more difficult to explain. And England, with Bermuda involved, was not skeptical; as a matter of fact, the British authorities were astonished. Warships were starting for Bermuda; and that morning of May 16th, with the passenger lines in New York not sailing for Bermuda, American warships were ordered to Hamilton. The menace, whatever it was, would soon be ended.

That was May 16th. Another night passed, and on May 17th the world rang with startled horror and a growing terror. Panics were beginning in all the towns and cities of the American seaboard north of Cape Hatteras. It was no longer a matter of merely seeing "ghosts." There had been real attacks the previous night.

There had been a variety of incidents, extraordinarily horrifying--so diverse, so unexpected that they could not have been guarded against. It was a dark night, an area of low pressure with leaden storm-clouds over all the Atlantic coastal region, from Charleston north to the Virginia Capes. A coastal passenger ship off Hatteras sent out a frantic radio distress call. The apparitions of men had suddenly been seen in mid-air directly in the ship's course. The message was incoherent; the vessel's wireless operator was locked in his room at the transmitter, wildly describing an attack upon the ships.

The white apparitions--a group of twenty or thirty men--had been marching in mid-air when the ship sighted them directly over its bow. In the darkness of the night they were only a hundred feet ahead when the lookout saw them. In a moment the vessel was under them, and they began materializing.... The account grew increasingly
incoherent. The figures materialized and fell to the deck, picked themselves up and began running about the ship, attacking with little green light-beams. The ship's passengers and crew vanished, obliterated; annihilated. It seemed that young women among the passengers were being spared. The ship was melting—the wooden decks, all the wooden super-structure melting.... A few moments of fantastic horror, then the distress call died into silence as doubtless the green light-beams struck the operator's little cabin.

* * * * *

That vessel was found the next day, grounded on the shoals off Hatteras. The sea was oily and calm. It lay like a gruesome shell, as though some fire had swept all its interior. Yet not fire either, for there were no embers, no ashes. Diseased, leprous, gruesomely weird with parts of its interior intact and other parts obliterated. And no living soul was upon it save one steward crouching in a lower cabin laughing with madness which the shock of what he had seen brought upon him.

On land, a railroad train in Virginia had been wrecked, struck apparently by a greenish ray. And also in Virginia, during the early evening in a village, an outdoor festival at which there were many young girls was attacked by apparitions suddenly coming into solidity. The report said that thirty or more young girls were missing. The little town was in chaos.

And the chaos, that next day, spread everywhere. It was obvious now that the enemy was advancing northward. In Washington, Baltimore, Philadelphia, panics were beginning. New York City was seething with excitement. People were leaving all the towns and cities of the area. An exodus north and westward. In New York, every steamship, airplane and railroad train was crowded with departing people. The roads to Canada and to the west were thronged with outgoing automobiles.

But it was only a small part of the millions who remained. And the transportation systems were at once thrown into turmoil, with the sudden frantic demands threatening to break them down. And then a new menace came to New York. Incoming food supplies for its millions crowded into that teeming area around Manhattan, were jeopardized. The army of men engaged in all the myriad activities by which the great city sustained itself were as terrified as anyone else. They began deserting their posts. And local communication systems went awry. The telephones, the lights, local transportation—all of them began limping, threatening to break.

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Tremendous, intricate human machine by whose constant activity so many millions are enabled to live so close together! No one could realize how vastly interwoven are a million activities which make life in a great city comfortable and safe until something goes wrong! And one wrong thing so swiftly affects another! As though in a vastly intricate mechanism little cogs were breaking, and the breaks spreading until presently the giant fly-wheels could no longer turn.

If the startled Federal and State officials could have foreseen even the events of the next forty-eight hours they would have wanted New York City deserted of the population. But that was impossible. Even if everyone could have been frightened into leaving, the chaos of itself would have brought death to untold thousands.

As it was, May 17th and 18th showed New York in a growing chaos. Officials now were wildly trying to stem the panics, trying to keep organized the great machines of city life.

It is no part of my plan for this narrative to try and detail the events in New York City as the apparitions advanced upon it. The crowded bridges and tunnels; the traffic and transportation accidents; the failure of the lights and telephones and broadcasting systems; the impending food shortage; the breaking out of disease from a score of causes; the crushed bodies lying in the streets where frantic mobs had trampled them and no one was available to take them away. The scenes beggar description.

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And in all this the enemy had played no part save that of causing terror. Warships gathered in New York harbor were impotent. State troops massed in New Jersey, across the Hudson from New York, and in Putnam and Westchester Counties, were powerless to do more than try and help the escaping people since there was no enemy of tangible substance to attack. Patrolling airplanes, armed with bombs, were helpless. The white apparitions were gathering everywhere in the neighborhood of New York City. But they remained only apparitions, imponderable wraiths, non-existent save that they could be dimly seen. And even had they materialized, no warships could shell the city, for millions of desperate people were still within it trying to get away.

The news from little Bermuda was submerged, unheeded, in this greater catastrophe. But on the night of May 17th when the American warships arrived off Hamilton, the Paget invaders were gone.

The menace in Bermuda was over; it was the great New York City which was menaced now. The apparitions which had advanced from the south were suddenly joined by a much more numerous army. On the night of May 19th it had reached New York. Two or three thousand glowing white shapes were apparent, with yet other thousands perhaps hovering just beyond visibility. They made no attack. They stood encamped on the borderland of the
Unknown realm to which they belonged. Busy with their preparations for battle and watching the stricken city to which already mere terror had brought the horror of disease and death.

It seemed now that this Fourth Dimension terrain co-existing within in the space of New York City, must be a tumbled, mountainous region of crags and spires, and yawning pits, ravines and valley depths. Jagged and precipitous indeed, for there were apparitions encamped in the air above Manhattan and harbor—higher in altitude than the Chrysler or the Empire State towers. Other wraiths showed in a dozen places lower down—some within the city buildings themselves. And yet others were below ground, within the river waters, or grouped seemingly a hundred feet beneath the street levels.

Fantastic army of wraiths! In the daylight they almost faded, but at night they glowed clearly. Busy assembling their weapons of war. Vanishing and reappearing at different points. Climbing or descending the steep cliffs and crags of their terrain to new points of vantage; and every hour with their numbers augmenting. And all so silent! So grimly purposeful, and yet so ghastly silent!

It was near midnight of May 19th when the wraiths began materializing and the attack upon New York City began!

CHAPTER VII
The Invisible World

Tako showed us how to operate the transition mechanism. The little banana grove on the Bermuda hilltop began fading. There was a momentary shock; a reeling of my head; a sudden sense of vibration within me. And then a feeling of lightness, weightlessness; and freedom, as though all my earthly life I had been shackled, but now was free.

The thing was at first terrifying, gruesome; but in a moment those feelings passed and the weightless freedom brought an exuberance of spirit.

Don and I were sitting with Jane between us, and the figure of Tako fronting us. I recall that we clung together, terrified. I closed my eyes when the first shock came, but opened them again to find my head steadying. Surprising vista! I had vaguely fancied that Tako, Jane and Don would be sitting here dissolving into apparitions. But my hands on Jane's arm felt it as solid as before. I stared into her face. It was frightened, white and set, but smiling at me.

"You all right, Bob? It's not so difficult, is it?"
She had endured this before. She reached out her hands, one to Don and one to me.

"We're dropping. I don't think it's far down, but be careful. Straighten your legs under you."

We seemed unchanged; Don and Jane were the same in aspect as before, save the color of their garments seemed to have faded to a gray. It was the Bermuda hilltop which to our vision was changing. The grove was melting, turning from green and brown to a shimmering silver. We now looked upon ghostly, shadowy trees; fading outlines of the nearby house; the nearby figures of Tako's men and the group of captive girls—all shadowy apparitions. The voices were fading; a silence was falling upon us with only the hum of the mechanism sounding in my ears.

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I felt with a shock of surprise that I was no longer seated on the ground. I seemed, for an instant floating, suspended as though perhaps immersed in water. The sweep of the ground level was a vague shadowy line of gray, but my legs had dropped beneath me. I was drifting down, sinking, with only Jane's hand to steady me.

"Thrust your feet down," she murmured. "A little fall. We want to land on our feet."

The imponderable ground of the banana grove was rising. We dropped, as though we were sinking in water. But we gathered speed; we felt a weight coming to our bodies. At last we fell; my feet struck a solid surface with a solid impact. Don and I lost our balance, but Jane steadied us. We were standing upon a dark rock slope, steeply inclined.

"Off with the current!" came Tako's voice. "The belt switch--throw it back!"

I found the little lever. The current went off. There had been a moment when the spectral shadows of my own world showed in the air above me. But we passed their visible limits and they faded out of sight.

We were in the realm of the Fourth Dimension. Outdoors, in a region of glowing, phosphorescent night....

* * * * *

"This way," said Tako. "It is not far. We will walk. Just a moment, you three. I would not have you escape me."

Our revolvers were gone. Being metal, they could not, of actuality, be carried into the transition. We had no light-beam cylinders, nor did we as yet know how to use them. Tako stood before us; he reached to the operating mechanisms under the dial-face at our belts, making some disconnections which we did not understand.

His smile in the semi-darkness showed with its familiar irony. "You might have the urge to try some escaping transition. It would lose you in the Unknown. That would be death! I do not want that."

I protested, "We are not fools. I told you if you would spare us, return us safely to Bermuda when this is over--"
"That you might be of help to me," he finished. "Well, perhaps you will. I hope so. You will do what you can to help, willingly or otherwise; that I know." His voice was grimly menacing. And he laughed sardonically. "You are no fools, as you say. And Jane--" His glance went to her. "Perhaps, before we are through with this, you may even like me, Jane."

Whatever was in his mind, it seemed to amuse him.

"Perhaps," said Jane.

We three had had only a moment to talk together. There had been no possibility of escape. It was obvious to us that Tako was the leader of these invaders; and, whatever they were planning, our best chance to frustrate it was to appear docile. Safety for us--the possibility of later escaping--all of that seemed to lie in a course of docility. We would pretend friendliness; willingness to help.

Tako was not deceived. We knew that. Don, in those two or three hours we were with Tako before starting upon the transition, had said:

"But suppose we do help you in your scheme, whatever it is? There might be some reward for us, eh? If you plan a conquest, riches perhaps--"

Tako had laughed with genuine amusement. "So? You bargain? We are to be real friends--fellow conquerors? And you expect me to believe that?"

Yet now he seemed half to like us. And there was Jane's safety for which we were scheming. Tako had been interested in Jane. We knew that. Yet she was at first little more to him than one of the girl captives. He might have left her with those others. But she was with us now, to stay with us upon this journey, and it was far preferable.

"This way," said Tako. "We will walk. It is not far to my encampment where they are preparing for the trip."

It seemed that a vast open country was around us. A rocky, almost barren waste; a mountainous region of steep gray defiles, gorges and broken tumbled ravines. A void of darkness hung overhead. There were no stars, no moon, no light from above. Yet I seemed presently to see a great distance through the glowing deep twilight. The glow was inherent to the rocks themselves; and to the spare, stunted, gray-blue vegetation. It was a queerly penetrating, diffused, yet vague light everywhere. One could see a considerable distance by it. Dim colors were apparent.

We trod the rocks with a feeling of almost normal body weight. The air was softly warm like a night in the tropics, with a faint breeze against our faces. It seemed a trackless waste here. We mounted an ascending ramp, topped a rise with an undulating plateau ahead of us.

Tako stood a moment for us to get our breath. The air seemed rarefied; we were panting, with our cheeks tingling.

"My abode is there." He gestured to the distant lowland region behind us. We were standing upon a gray hilltop. The ground went down a tumbled broken area to what seemed a lowland plain. Ten miles away--it may have been that, or twice that--I saw the dim outline of a great castle or a fortress. A building of gigantic size, it seemed strangely fashioned with round-shaped domes heaped in a circle around a tower looming in the center. A wall, or a hedge of giant trees, I could not tell, but it seemed as gigantic as the wall of China, and was strung over the landscape in an irregular circle to enclose an area of several square miles, with the castle-fortress in its center. A little city was there, nestled around the fortress--a hundred or two small brown and gray mounds to mark the dwellings. It suggested a little feudal town of the Middle Ages of our own Earth, set here in this trackless waste.

And I saw, down on the plain, a shining ribbon of river with thick vegetation along its banks. And within the enclosing wall there, was the silvery sheen of a lake near the town; patches of trees, and brownish oval areas which seemed to be fields under cultivation.

"My domain," Tako repeated. There was a touch of pride in his voice. "I rule it. You shall see it--when we are finished with New York."

Again his gaze went to Jane, curiously contemplative. We started walking over the upper plateau level, seemingly with nothing in advance of us save empty luminous darkness. A walk of an hour. Perhaps it was that long. Time here had faded with our Earthly world. It was difficult to gauge the passing minutes--as difficult as to guess at the miles of this luminous distance.

As though the sight of his fortress--his tiny principality, whose inhabitants he ruled with absolute sway--had awakened in Tako new emotions, he put Jane beside him and began talking to us with apparent complete frankness. He must have been an hour, during which he explained this world of his, of which we were destined to have so brief a glimpse, and told us upon what diabolical errand he and his fellows were embarked. I recall that as he talked Jane gripped me in horror. But she managed to smile when Tako smiled at her. He was naively earnest as he told us of his coming conquest. And Jane, with woman's intuition knew before Don and I realized it, that it was to herself, a beautiful girl of Earth, he was talking, seeking her admiration for his prowess.
Tako was what in Europe of the Middle Ages would have amounted to a feudal prince. He was one of many here in this realm; each had his little domain, with his retainers cultivating his land, paying fees to him so that the overlord lived in princely idleness.

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Scattered at considerable distances, one from the other, these rulers of their little principalities were loosely bound into a general government; but at home each was a law unto himself. They lived in princely fashion, these lords of the castle, as they were called. Among the retainers, monogamy was practiced. The workers had their little families—husband, wife and children. But for the rulers, more than one wife was the rule. Within each castle was a harem of beauties, drawn perforce from the common people. The most beautiful girls of each settlement were trained from childhood to anticipate the honor of being selected by the master for a life in the castle.

They were connoisseurs of woman's beauty, these overlords. By the size of his harem and the beauty and talent of its inmates was an overlord judged by his fellows.

Out of this had grown the principal cause for war in the history of the realm. Beautiful girls were scarce. Raids were made by one lord upon the village and harem of another.

Then had come to Tako the discovery of the great world of our Earth, occupying much of this same space in another state of matter. "I discovered it," he said with his gaze upon Jane. "How?" Don demanded. "It came," he said, "out of our scientific method of transportation, which very soon I will show you. We are a scientific people. Hah!" He laughed ironically. "The workers say that we princes are profligate—that we think only of women and music. But that is not so. Once, many generations ago, we were a tremendous nation, and skilled in science far beyond your own world—and with a population a hundred times what we have now. The land everywhere must have been rich and fertile. There were big cities—the ruins of them are still to be seen.

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"And then our climate changed. There was, for us, a world catastrophe, the cause and the details of which no one now knows very clearly. It sent our cities, our great civilizations into ruins. It left us with this barren waste with only occasional lowland fertile spots which now by heredity we rulers control, each to possess his own.

"But that past civilization gave us a scientific knowledge. Much of it is lost—we are going down hill. But we have some of it left, and we profligate rulers, as the workers call us, cherish it. But what is the use of teaching it to the common people? We do very little of that. And our weapons of war we keep to ourselves—except when there is a raid and our loyal retainers go forth with us to do battle."

"So you discovered how to get into our Earth world?" Don repeated. "Yes. Some years ago, and it was quite by chance. At first I experimented alone—and then I took with me a young girl."

Again he smiled at Jane. "Tolla is her name. She is here in our camp where our army is now, starting for New York. You will meet her presently. She loves me very much, so she says. She wants some day to lead my harem. I took her with me into the Unknown—into that place you call Bermuda. I have been there off and on for nearly a year of your Earth time, making my plans for what now is at last coming to pass."

"So that's how you learned our language?" I said. "Yes. It came easy to me and Tolla. That—and we were taught by two girls whom a year ago I took from Bermuda and brought in here."

"And what became of them?" Jane put in quietly. "Oh—why, I gave them away," he replied calmly. "A prince whose favor I desired, wanted them and I gave them to him. Your Earth girls are well liked by the men of my world. Their fame has already spread."

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He added contemplatively, "I often have thought how strange it is that your great world and mine should lie right here together—the one invisible to the other. Two or three minutes of time—we have just made the transition. Yet what a void!"

"The scientists of your past civilization," I said, "strange that they did not learn to cross it."

"Do you know that they did not?" he demanded. "Perhaps with secret visitations—"

It brought to us a new flood of ideas. We had thought, up there in St. Georges, that this Tako was a ghost. How could one say but that all or most manifestations of the occult were not something like this. The history of our Earth abounds with superstition. Ghosts—things unexplained. How can one tell but that all occultism is merely unknown science? Doubtless it is. I can fancy now that in the centuries of the past many scientists of this realm of the Fourth Dimension ventured forth a little way toward our world. And seeing them, we called them ghosts.

What an intrepid explorer was this Tako! An enterprising scoundrel, fired with a lust for power. He told us
now, chuckling with the triumph of it, how carefully he had studied our world. Appearing there, timidly at first, then
with his growing knowledge of English, boldly living in Hamilton.

His fame in his own world, among his fellow rulers, rapidly grew. The few Earth girls he produced were
eagerly seized. The fame of their beauty spread. The desire, the competition for them became keen. And Tako
gradually conceived his great plan. A hundred or more of the overlords, each with his hundred retainers, were
banded together for the enterprise under Tako's leadership. An army was organized; weapons and equipment were
assembled.

Earth girls were to be captured in large numbers. The most desirable of them would go into the harems of the
princes. The others would be given to the workers. The desire for them was growing rapidly, incited by the talk of
the overlords. The common man could have more than one wife—two, even three perhaps—supported by the princely
master. And Tako was dreaming of a new Empire; increased population; some of the desert reclaimed; a hundred
principalities banded together into a new nation, with himself as its supreme leader.

And then the attack upon Earth had begun. A few Earth girls were stolen; then more, until very quickly it was
obvious that a wider area than Bermuda was needed. Tako's mind flung to New York—greatest center of population
within striking distance of him.[3] The foray into Bermuda—the materialization of that little band on the Paget
hilltop was more in the nature of an experiment than a real attack. Tako learned a great deal of the nature of this
coming warfare, or thought he did.

[3] The extent of the Fourth Dimensional world was never made wholly clear to us. Its rugged surface was
coincident with the surface of our earth at Bermuda, at New York City, and at many points along the Atlantic
seaboard of the United States. For the rest, there is no data upon which one may even guess.

As a matter of actuality, in spite of his dominating force, the capacity for leadership which radiated from him,
there was a very naive, fatuous quality to this strange ruler. Or at least, Don and I thought so now. As the details of
his plot against our Earth world unfolded to us, what we could do to circumvent him ran like an undercurrent across
the background of our consciousness. He knew nothing, or almost nothing of our Earth weapons. What conditions
would govern this unprecedented warfare into which he was plunging—of all that he was totally ignorant.

But, we were speedily to learn that he was not as fatuous as he at first seemed. These two worlds—occupying
the same space and invisible to each other—would be plunged into war. And Tako realized that no one, however
astute, of either world could predict what might happen. He was plunging ahead, quite conscious of his ignorance.
And he realized that there was a vast detailed knowledge of the Earth world which we had and he did not. He would
use us as the occasion arose to explain what might not be understandable to him.

I could envisage now so many things of such a character. The range of warships and artillery. The weapons a
plane might use. The topography of New York City and its environs.... And the more Tako needed us, the less we
had to fear from him personally. We would have the power to protect Jane from him—if we could sufficiently
persuade him he needed our good will. Ultimately we might plunge his enterprise into disaster, and with Jane escape
from him—that too I could envisage as a possibility.

The mind flings far afield very rapidly! But I recall that it occurred to me also that I might be displaying many
of the fatuous qualities I was crediting to Tako, by thinking such thoughts!

I have no more than briefly summarized the many things Tako told us during that hour while we strode across
the dim rocky uplands toward his mobilized army awaiting its departure for the scene of the main attack. Some of
his forces had already gone ahead. Several bands of men were making visual contact with the seacoast of the
southern United States. It was all experimentation. They were heading for New York. They would wait there, and
not materialize until this main army had joined them.

We saw presently, in the distance ahead of us, a dim green sheen of light below the horizon. Then it disclosed
itself to be quite near—the reflection of green light from a bowl-like depression of this rocky plateau.

We reached the rim of the bowl. The encampment of Tako's main army lay spread before us.

CHAPTER VIII

The Flight through the Fourth Dimension

"This is the girl, Tolla," said Tako quietly. "She will take care of you, Jane, and make you comfortable on this
trip."

In the dull green sheen which enveloped the encampment, this girl of the Fourth Dimension stood before us. She
had greeted Tako quietly in their own language, but as she gazed up into his face it seemed that the anxiety for
his welfare turned to joy at having him safely arrive. She was a small girl; as small as Jane, and probably no older.
Her slim figure stood revealed, garbed in the same white woven garments as those worn by the men. At a little
distance she might have been a boy of Earth, save that her silvery white hair was wound in a high conical pile on her
head, and there were tasseled ornaments on her legs and arms.

Her small oval face, as it lighted with pleasure at seeing Tako, was beautiful. It was delicate of feature; the eyes pale blue; the lips curving and red. Yet it was a curious face, by Earth standards. It seemed that there was an Oriental slant to the eyes; the nose was high-bridged; the eyebrows were thin pencil lines snow-white, and above each of them was another thin line of black, evidently she had placed there to enhance her beauty.

Strange little creature! She was the only girl of this world we were destined to meet; she stood beside Jane, seemingly so different, and yet, we were to learn, so humanly very much the same. Her quiet gaze barely touched Don and me; but it clung to Jane and became inscrutable.

"We will travel together," Tako said. "You make her comfortable, Tolla."

"I will do my best," she said; her voice was soft, curiously limpid. "Shall I take her now to our carrier?"

"Yes."

It gave me a pang to see Jane leave with her; Don shot me a sharp, questioning glance but we thought it best to raise no objection.

"Come," said Tako. "Stay close by me. We will be in the carrier presently."

There was an area here in the bowl-like depression of at least half a mile square upon which an assemblage of some five thousand or more men were encamped. It was dark, though an expanse of shifting shadows and dull green light mingled with the vague phosphorescent sheen from the rocks. The place when we arrived was a babble of voices, a confusion of activity. The encampment, which obviously was temporary--perhaps a mobilization place--rang with the last minute preparations for departure. Whatever habitations had been here now were packed and gone.

Tako led us past groups of men who were busy assembling and carrying what seemed equipment of war toward a distant line of oblong objects into which men were now marching.

"The carriers," said Tako. He greeted numbers of his friends, talking to them briefly, and then hurried us on. All these men were dressed similarly to Tako, but I saw none so tall, nor so commanding of aspect. They all stared at Don and me hostilely, and once or twice a few of them gathered around us menacingly. But Tako waved them away. It brought me a shudder to think of Jane crossing this camp. But we had watched Tolla and Jane starting and Tolla had permitted none to approach them.

"Keep your eyes open," Don whispered. "Learn what you can. We've got to watch our chance--" We became aware that Tako was listening. Don quickly added, "I say, Bob, what does he mean--carriers?"

I shrugged. "I don't know. Ask him."

We would have to be more careful; it was obvious that Tako's hearing was far keener than our own. He was fifteen feet away, but he turned his head at once.

"A carrier you would call in Bermuda a tram. Or a train, let us say." He was smiling ironically at our surprise that he had overheard us. He gestured to the distant oblong objects. "We travel in them. Come, there is really nothing for me to do; all is in readiness here."

The vehicles stood on a level rocky space at the farther edge of the camp. I think, of everything I had seen in this unknown realm, the sight of these vehicles brought the most surprise. The glimpse we had had of Tako's feudal castle seemed to suggest primitiveness.

But here was modernity--super-modernity. The vehicles--there were perhaps two dozen of them--were all apparently of similar character, differing only in size.

They were long, low oblongs. Some were much the size and shape of a single railway car; others twice as long; and several were like a very long train, not of single joined cars, but all one structure. They lay like white serpents on the ground--dull aluminum in color with mound-shaped roofs slightly darker. Rows of windows in their sides with the interior greenish lights, stared like round goggling eyes into the night.

When we approached closer I saw that the vehicles were not of solid structure, but that the sides seemingly woven of wire-mesh--or woven of thick fabric strands.[4]

[4] The vehicles were constructed of a material allied in character to that used for garments by the people of this realm. It was not metal, but an organic vegetable substance.

The army of white figures crowded around the vehicles. Boxes, white woven cases, projectors and a variety of disks and dials and wire mechanisms were being loaded aboard. And the men were marching in to take their places for the journey.

Tako gestured. "There is our carrier."

It was one of the smallest vehicles--low and streamlined, so that it suggested a fat-bellied cigar, white-wrapped. It stood alone, a little apart from the others, with no confusion around it. The green-lighted windows in its sides goggled at us.
We entered a small porte at its forward pointed end. The control room was here, a small cubby of levers and banks of dial-faces. Three men, evidently the operators, sat within. They were dressed like Tako save that they each had a great round lens like a monocle on the left eye, with dangling wires from it leading to dials fastened to the belt.

Tako greeted them with a gesture and a gruff word and pushed us past them into the car. We entered a low narrow white corridor with dim green lights in its vaulted room. Sliding doors to compartments opened from one side of it. Two were closed; one was partly open. As we passed, Tako called softly:

"All is well with you, Tolla?"

"Yes," came the girl's soft voice.

I met Don's gaze. I stopped short and called:

"Are you all right, Jane?"

I was immensely relieved as she answered, "Yes, Bob."

Tako shoved me roughly. "You presume too much."

The corridor opened into one main room occupying the full ten-foot width of the vehicle and its twenty-foot middle section. Low soft couch seats were here, and a small table with food and drink upon it; and on another table low to the floor, with a mat-seat beside it, a litter of small mechanical devices had been deposited. I saw among them two or three of the green-light hand weapons.

Tako followed my gaze and laughed. "You are transparent. If you knew how to use those weapons, do you think I would leave them near you?"

We were still garbed in the white garments, but the disks and wires and helmet had been taken from us.

"I say, you needn't be so suspicious," Don protested. "We're not so absolutely foolish. But if you want any advice from us on how to attack New York, you've got to explain how your weapons are used."

Tako seated us. "All in good time. We shall have opportunity now to talk."

"About the trip--" I said. "Are we going to New York City?"

"Yes."

"How long will it take?"

"Long? That is difficult to say. Have you not noticed that time in my world has little to do with yours?"

"How long will it seem?" I persisted.

He shrugged. "That is according to your mood. We shall eat once or twice, and get a little sleep."

One of the window openings was beside us with a loosely woven mesh of wires across it. Outside I could see the shifting lights. Men were embarking in the other vehicles; and the blended noise from them floated in to us.

Questions flooded me. This strange journey, what would it be like? I could envisage the invisible little Bermuda in the void of darkness over us now; or here in this same space around us. No, we had climbed from where we landed in the space close under the Paget hilltop. And we had walked forward for perhaps an hour. The space of Bermuda would be behind us and lower down. This then was the open ocean. I gazed at the solid rocky surface outside our window. Nearly seven hundred miles away must be New York City. We were going there. How? Would it be called flying? Or following this rocky surface?

As though to answer my thoughts Tako gestured to the window. "See. The first carrier starts away."

The carrier lay like a stiff white reptile on the ground. Its doors were closed, and watching men stood back from it.

Don gasped, "Why--it's fading! A transition!"

It glowed along all its length and grew tenuous of aspect, until in a moment that solid thing which had been solidly resting there on a rock was a wraith of vehicle. A great oblong apparition--the ghost of a reptile with round green spots on its sides. A fading wraith. But it did not quite disappear. Hovering just within visibility, it slowly, silently slid forward. It seemed, without changing its level, to pass partly through an upstanding crag which stood in its path. Distance dimmed it, dwindled it; and in a moment it was gone into the night.

"We will start," said Tako abruptly. "Sit where you are. There will be a little shock, much like the transition coming in from your world." He called, "Tolla, we start."

A signal-dial was on the room wall near him. He rose and pressed its lever. There was a moment of silence. Then the current went on. It permeated every strand of the material of which the vehicle was constructed. It contacted with our bodies. I felt the tingle of it; felt it running like fire through my veins. The whole interior was humming. There was a shock to my senses, swiftly passing, followed by a sense of weightless freedom. But that lightness was an illusion, a comparison with externals only, for the seat to which I clung remained solid, and my body pressed upon it with a feeling of normal weight.
Outside the window, the dark scene of rocks and vehicles and men was fading; turning ghostly, shadowy, spectral. But it did not quite vanish; it held its wraithlike outlines, and in a moment began sliding silently backward. It seemed that we also passed through a little butte of rocks. Then we emerged again into the open; and, as we gathered speed, the vague spectral outlines of a rocky landscape slid past us in a bewildering panorama.

We were away upon the journey.[5]

[5] What we learned of the science of the invisible realm was perforce picked piecemeal by us from all that we saw, experienced, and what several different times Tako was willing to explain to us. And it was later studied by the scientists of our world, whose additional theories I can incorporate into my own knowledge. Yet much of it remains obscure. And it is so intricate a subject that even if I understood it fully I could do no more than summarize here its fundamental principles.

The space-transition of these vehicles, Tako had already told us, was closely allied to the transition from his world to ours. And the weapons were of the same principles. The science of space-transition, limited to travel from one portion of the realm to another, quite evidently came first. The weapons, the forcible, abrupt transition of material objects out of the realm into other dimensions--into the Unknown--this principle was developed from the traveling. And from them both Tako himself evolved the safe and controlled transition from his world to ours.

Concerning the operation of these vehicles: Motion, in our Earth-world or any other, is the progressive change of a material object in relation to its time and space. It is here now, but it was there. Both space and time undergo a simultaneous change; the object itself remains unaltered, save in its position.

In the case of the vehicles, the current I have already mentioned (used in the mechanism for the transition from Earth to the other realm) that current, circulating in the organic material of which the vehicle was composed, altered the state of matter of the carrier and everything within the aura of the current's field. The vehicle and all its contents, with altered inherent vibratory rate of its molecules, atoms and electrons, was in effect projected into another world. A new dimension was added to it. It became an imponderable wraith, resting dimly visible in a sort of borderland upon the fringe of its own world.

Yet it had not changed position. It still remained quiescent. Then the current was further altered, and the time and space co-ordinates set into new combinations. This change of the current was a progressive change. Controlled and carefully calculated by what intricate theoretic principles and practical mechanisms no scientist of our world can yet say.

It is clear, however, that as this progressive change in space-time characteristics began, the vehicle perforce must move slightly in space and time to reconcile itself to the change.

There never has been a seemingly more abstruse subject for the human mind to grasp than the theories involving a true conception of space-time. Yet, doubtless, to those of Tako's realm, inheriting, let me say, the consciousness of its reality, there was nothing abstruse about it.

An analogy may make it clearer. The vehicle, hovering in the borderland, might be called in a visible but gaseous state. A solid can be turned to gas merely by the alteration of the vibratory rate of its molecules.

This unmoving (gaseous) vehicle, is now further altered in space-time characteristics. Suppose we say it is very slightly thrown out of tune with its spatial surroundings at the time which is its present. Nature will allow no such disorganization. The vehicle, as a second of time passes, is impelled by the force of nature to be in a different place. This involves motion. A small change in the first second. Then the current alters it progressively faster. The change, of necessity, is progressively greater, the motion more rapid.

And this, controlled as to direction, became transportation. The determination of direction at first thought seems amazingly intricate. In effect, that was not so. With space-time factors set as a destination, i. e., the place where the vehicle must end its change at a certain time, all the intermediate changes become automatic. With every passing second it must be at a reconcilable place--the direction of its passage perforce being the shortest path between the two.

With this in mind, the transition from one world to another becomes more readily understandable. No natural change of space is involved, merely the change of the state of matter. It was the same change as that which carried the vehicles into a shadowy borderland, and then pushed further into new dimensional realms.

The green light-beam weapons were merely another application of the same principle. The characteristics of the green light current, touching organic matter, altered the vibratory rate of what was struck to coincide with the light. A solid cake of ice under a blow-torch becomes steam by the same principle. The light-beams were swift and violent in their action. The change in them was progressive also--but it was so swiftly violent a change that nothing living could survive the shock of the enforced transition.

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There was little to see during this strange flight. Outside our windows gray shadows drifted swiftly past--a shadowy, ghostly landscape of gray rocks. Sometimes it was below us, so that we seemed in an airship winging
above it. Then abruptly it would rise over us and we plunged into it as though it were a mere light-image, a mirage.

Hours passed. For the most part the shadowy void seemed a jagged mountainous terrain, a barren waste. There were great plateau uplands, one of which rose seemingly thousands of feet over us. And there was perhaps an hour of time when the surface of the world had dropped far away, so far down that it was gone in the distance. Like a projectile we sped level, unswerving. And at last the shadows of the landscape came up again. And occasionally we saw shadowy inhabited domains—enclosing walls around water and vegetation, with a frowning castle and its brood of mound-shaped little houses like baby chicks clustered around the mother hen.

Tako served us with a meal; it was strange food, but our hunger made it palatable. Jane and Tolla remained in their nearby cabin. We did not see them, but occasionally Don or I, ignoring Tako's frown, called out to Jane, and received her ready answer.

Occasionally also, we had an opportunity to question Tako. He had begun tell us the general outline of his plans. The important fact was that the army would mobilize just within visibility of New York.

"Nothing can touch us then," Tako said. "You will have to explain what weapons will be used against me. Particularly the long-range weapons are interesting. But you have no weapons which could penetrate into the shadows of the borderland, have you?"

"No," said Don. "But your weapons--" He tried not to seem too intent. "Look here, Tako, I don't just understand how you intend to conquer New York."

"Devastate it," Tako interrupted. "Smash it up, and then we can materialize and take possession of it. My object is to capture a great number of young women—beautiful young women."

"How?" I demanded. "By smashing up New York? There are thousands of young women there, but you would kill them in the process. Now if you would try some other locality. For instance, I could direct you to open country--"

* * * * *

He understood my motive. "I ask not that kind of advice. I will capture New York; devastate it. I think then your rulers will be willing voluntarily to yield all the captives I demand. Or, if not, then we will plan to seize them out of other localities."

Don said, "Suppose you tell us more clearly just how you expect to smash New York, as you call it. First, you will gather, not materialized, but only visible to the city."

"Exactly. That will cause much excitement, will it not? Panics—terror. And if we are only wraiths, no weapons of your world can attack us."

"Nor can yours attack the city. Can they?"

He did not at first answer that; and then he smiled. "Our hand light-projectors could not penetrate out from the borderland without losing their force. But we have bombs. You shall see.[6] The bombs alone will devastate New York, if we choose to use them. I have also a long-range projector of the green light-beam. It is my idea, when the city is abandoned by the enemy that we can take possession of some prominent point of vantage. A tall building, perhaps." He smiled again his quiet grim smile. "We will select one and be careful to leave it standing. I will materialize with our giant projector, dominate all the region and then we can barter with your authorities. It is your long-range guns I most fear. When the projector is materialized—and we are ready to bargain—then your airplanes, warships lying far away perhaps, might attack. Suppose now you explain those weapons to me."

[6] Materialization bombs, we afterward called them; they played a diabolical part in the coming events. They were of many sizes and shapes, but most of them were small in size and shape, like a foot-long wedged-shaped brick, or the head of an ax. They were constructed of organic material, with a wire mesh of the transition mechanism encasing them, and an automatic operating device like the firing fuse of a bomb.

* * * * *

For an hour or more he questioned us. He was no fool, this fellow; he knew far more of the conditions ahead of him than we realized. I recall that once I said:

"You have never been in New York?"

"No. Not materialized. But I have observed it very carefully."

As a lurking ghost!

"We have calculated," he went on, "the space co-ordinates with great precision. That is how we have been able to select the destination for this carrier now. You cannot travel upon impulse by this method. Our engineers, as you might call them, must go in advance with recording apparatus. Nothing can be done blindly."

It brought to my mind the three pilots now operating our vehicle. I mentioned the lens on their left eyes like a monocle.

"With that they can see ahead of us a great distance. It flings the vision—like gazing along a beam of light—to space-time factors in advance of our present position. In effect, a telescope."
There were a few hours of the journey when Don and I slept, exhausted by what we had been through. Tako was with us when we dozed off, and I recall that he was there when we awakened. How much time passed we could not tell.

"You are refreshed?" he said smilingly. "And hungry again, no doubt. We will eat and drink—and soon we will arrive at the predestined time and place."

We were indeed hungry again. And while we were eating Tako gestured to the window. "Look there. Your world seems visible a little."

Just before we slept it had seemed that mingled with the shadows of Tako's world was the gray outline of an ocean surface beneath us. I gazed out at the dim void now. Our flight was far slower than before. We were slackening speed for the coming halt. And I saw now that the shadows outside were the mingled wraiths of two spectral worlds, with us drifting forward between and among them. The terrain of Tako's world was bleaker, more desolate and more steeply mountainous than ever. There were pits and ravines and gullies with jagged mountain spires, cliffs and towering gray masses of rock.

And mingled with it, in a general way coincidental with it in the plane of the same space, we could see now the tenuous shapes of our own world. Vague, but familiar outlines! We had passed Sandy Hook! The ocean lay behind us. A hundred feet or so beneath us was the level water of the Lower Bay.

"Don!" I murmured. "Look there! Long Island off there! And that's Staten Island ahead of us!"

"Almost at our destination," Tako observed. And in a moment he gestured again. "There is your city. Have a good look at your dear New York."

Diagonally ahead through the window we saw the spectres of the great pile of masonry on lower and mid-Manhattan. Spectres of the giant buildings; the familiar skyline, and mingled with it the ghostly gray outlines of the mountains and valley depths of Tako's world. All intermingled! The mountain peaks rose far higher than the tallest of New York's skyscrapers; and the pits and ravines were lower than the waters of the harbor and rivers, lower than the subways and the tubes and the tunnels.

"Another carrier!" Don said abruptly. "See it off there!"

It showed like a great gray projectile coming in level with us. And then we saw two others in the distance behind us. Fantastic, ghostly arrival of the enemy! Weird mobilization here within the space of the doomed New York.

"Can they see us?" I murmured. "Tako, the people down there on Staten Island—can they see us?"

"Yes," he smiled. "Don't you think so? Look! Are not those ships of war? Hah! Gathered already—awaiting our coming!"

I have already given a brief summary of the events of the days and nights just past here in New York. The terror at the influx of apparitions. The panic of the city's teeming millions struggling too eagerly to escape.

It was night now—the night of May 19th. The city was in chaos, but none of the details were apparent to us as we arrived. But we could see, as we drifted with slow motion above the waters of the harbor, that there were warships anchored here, and in the Hudson River. They showed as little spectral dots of gray. And in the air, level with us at times, the wraiths of encircling airplanes were visible.

"They see us," Tako repeated.

They did indeed. A puff of light and up-rolling smoke came from one of the ships. A silent shot. Perhaps it screamed through us, but we were not aware of it.

Tako chuckled. "They get excited, do they not? We strike terror—are they going to fight like excited children?"

We were under sudden bombardment. Fort Wadsworth was firing; puffs showed from several of the warships; and abruptly a group of ghostly monoplanes dove at us like birds. They went through us, emerged and sped away. And in a moment the shots were discontinued.

"That is better," said Tako. "What a waste of ammunition."

Our direction was carrying us from mid-Manhattan. The bridges to Brooklyn were visible. Beyond them, over New York, mingled with teeming buildings was a mountain slope of Tako's realm. I saw one of our carriers lying on a ledge of it.

A sudden commotion in our car brought our attention from the scene outside. The voices of girls raised in anger. Tolla's voice and Jane's! Then came the sound of a scuffle!

"By what gods!" Tako exclaimed.

We all leaped to our feet. Tako rushed for the door of the compartment with us after him. We burst in upon the girls. They were standing in the center of the little room. One of the chairs was overturned. Jane stood gripping Tolla
by the wrists, and with greater strength was forcibly holding her.

As we appeared, Jane abruptly released her, and Tolla sank to the floor and burst into wild sobs. Jane faced us, red and white of face, and herself almost in tears.

"What's the matter?" Don demanded. "What is it?"

But against all our questionings both girls held to a stubborn silence.

CHAPTER IX
A Woman Scorned

Jane afterward told us just what happened in that compartment of the carrier, and I think that for the continuity of my narration I had best relate it now.

The cubby room was small, not much over six feet wide, and twelve feet long. There was a single small door to the corridor, and two small windows. A couch stood by them; there were two low chairs, and a small bench-like table.

Tolla made Jane as comfortable as possible. Food was at hand; Tolla, after an hour or two served it at the little table, eating the meal with Jane, and sitting with her on the couch where they could gaze through the windows.

To Jane this girl of another world was at once interesting, surprising and baffling. Jane could only look upon her as an enemy. In Jane's mind there was no thought save that we must escape, and frustrate Tako's attack upon New York; and she was impulsive, youthful enough to think something might be contrived.

At all events, she saw Tolla in the light of an enemy who might be tricked into giving information.

Jane admits that her ideas were quite as vague as our own when it came to planning anything definite.

She at first studied Tolla, who seemed as young as herself and perhaps in her own world, was as beautiful. And within an hour or two she was surprised at Tolla's friendliness. They had dined together, gazed through the windows at the speeding shadows of the strange world sliding past; they had dozed together on the couch. During all this they could have been schoolgirl friends. Not captor and captive upon these strange weird circumstances of actuality, but friends of one world. And in outward aspect Tolla could fairly well have been a cultured girl of our Orient.

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Then Jane got a shock. She tried careful questions. And Tolla skillfully avoided everything that touched in any way upon Tako's future plans. Yet her apparent friendliness, and a certain girlish volubility continued.

And then, at one point, Tolla asked:

"Are you beautiful in Bermuda?"

"Why, yes," said Jane. "I guess so."

"I am beautiful in my world. Tako has said so."

"You love him, don't you?" Jane said abruptly.

"Yes. That is true." There was no hint of embarrassment. Her pale blue eyes stared at Jane, and she smiled a little quizzically. "Does it show so quickly upon my face that you saw it at once? I am called Tolla because I am pledged soon to enter Tako's harem."

Upon impulse Jane put her arm around the other girl as they sat on the couch. "I think he is very nice."

But she saw it was an error. The shadow of a frown came upon Tolla's face; a glint of fire clouded her pale, serene eyes.

"He will be the greatest man of his world," she said quietly.

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There was an awkward silence. "The harem, I am told," Jane said presently, "is one of your customs." She took a plunge. "And Tako told us why they want our Earth girls. There was one of my friends stolen from Bermuda--"

"And yet you call him very nice," Tolla interrupted with sudden irony. "Girls are frank in our world. But you are not. What did you mean by that?"

"I was trying to be friendly," said Jane calmly. "You had just said you loved him."

"But you do not love him?"

It took Jane wholly back. "Good Heavens, no!"

"But he--might readily love you?"

"I hope not!" Jane tried to laugh, but the idea itself was so frightening to her that the laugh sounded hollow. She gathered her wits. This girl was jealous. Could she play upon that jealousy? Would Tolla perhaps soon want her to escape? The idea grew. Tolla might even some time soon come to the point of helping her escape.

Jane said carefully, "I suppose I was captured with the idea of going into someone's harem. Was that the idea?"

"I am no judge of men's motives," said Tolla curtly.

"Tako said as much as that," Jane persisted. "But not necessarily into his harem. But if it should be his, why would you care? Your men divide their love--"

"I would care because Tako may give up his harem," Tolla interrupted vehemently. "He goes into this conquest
for power—for wealth—because soon he expects to rule all our world and band it together into a nation. He has always told me that I might be his only wife—some day—"

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She checked herself abruptly and fell into a stolid silence. It made Jane realize that under the lash of emotion Tolla would talk freely. But Jane could create no further opportunity then, for Tako suddenly appeared at their door. The girls had been together now some hours. Don and I were at this time asleep.

He stood now at the girl's door. "Tolla, will you go outside a moment? I want to talk to this prisoner alone."

And, interpreting the look which both girls flung at him, he added, "The door remains open. If she wants you back, Tolla, she will call."

Without a word Tolla left the compartment. But Jane saw on her face again a flood of jealousy.

Tako seated himself amiably. "She has made you comfortable?"

"Yes."

"I am glad."

He passed a moment of silence. "Have you been interested in the scene outside the window?" he added.

"Yes. Very."

"A strange sight. It must seem very strange to you. This traveling through my world—"

"Did you come to tell me that?" she interrupted.

He smiled. "I came for nothing in particular. Let us say I came to get acquainted with you. My little prisoner—you do not like me, do you?"

She tried to meet his gaze calmly. This was the first time Jane had had opportunity to regard Tako closely. She saw now the aspect of power which was upon him. His gigantic stature was not clumsy, for there was a lean, lithe grace in his movements. His face was handsome in a strange foreign fashion. He was smiling now; but in the set of his jaw, his wide mouth, there was an undeniable cruelty, a ruthless dominance of purpose. And suddenly she saw the animal-like aspect of him; a thinking, reasoning, but ruthless, animal.

"You do not like me, do you?" he repeated.

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She forced herself to reply calmly, "Why should I? You abduct my friends. There is a girl named Eunice Arton whom you have stolen. Where is she?"[7]

[7] Neither Eunice Arton, nor any of the stolen girls, have ever been heard from since. Like the thousands of men, women and children who met their death in the attack upon New York, Eunice Arton was a victim of these tragic events.

He shrugged. "You could call that the fortunes of war. This is war—"

"And you," she said, "are my enemy."

"Oh, I would not go so far as to say that. Rather would I call myself your friend."

"So that you will return me safely? And also Bob Rivers, and my cousin, Don—you will return us safely as you promised?"

"Did I promise? Are you not prompting words from my lips?"

Jane was breathless from fear, but she tried not to show it.

"What are you going to do with us?" she demanded. There is no woman who lacks feminine guile in dealing with a man; and in spite of her terror Jane summoned it to her aid.

"You want me to like you, Tako?"

"Of course I do. You interest me strangely. Your beauty—your courage—"

"Then if you would be sincere with me—"

"I am; most certainly I am."

"You are not. You have plans for me. I told Tolla I supposed I was destined for someone's harem. Yours?"

It startled him. "Why—" He recovered himself and laughed. "You speak with directness." He suddenly turned solemn. He bent toward her and lowered his voice; his hand would have touched her arm, but she drew away.

"In very truth, ideas are coming to me, Jane. I will be, some day soon, the greatest man of my world. Does that attract you?"

"N-no," she said, stammering.

"I wish that it would," he said earnestly. "I do of reality wish that it would. I will speak plainly, and it is in a way that Tako never spoke to woman before. I have found myself, these last hours, caring very much for your good opinion of me. That is surprising."

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She stared at him with sudden fascination mingled with her fear. He seemed for this moment wholly earnest and sincere. An attractive sort of villain, this handsome giant, turned suddenly boyish and naive.
"That is surprising," Tako repeated.
"Is it?"
"Very. That I should care what any woman thinks of me, particularly a captive girl—but I do. And I realize, Jane, that our marriage system is very different from yours. Repugnant to you, perhaps. Is it?"
"Yes," she murmured. His gaze held her; she tried to shake it off, but it held her.
"Then I will tell you this: I have always felt that the glittering luxury of a large harem is in truth a very empty measure of man's greatness. For Tako there will be more manly things. The power of leadership—the power to rule my world. When I got that idea, it occurred to me also that for a man like me there might be some one woman—to stand alone by my side and rule our world."

His hand touched her arm, and though she shuddered, she left it there. Tako added with a soft vibrant tenseness. "I am beginning to think that you are that woman."

There was a sound in the corridor outside the door—enough to cause Tako momentarily to swing his gaze. It broke the spell for Jane; with a shock she realized that like a snake he had been holding her fascinated. His gaze came back at once, but now she shook off his hand from her arm.

"Tolla told me you—you said something like that to her," Jane said with an ironic smile.

It angered him. The earnestness dropped from him like a mask. "Oh, did she? And you have been mocking me, you two girls?"

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He stood up, his giant length bringing his head almost to the vaulted ceiling of the little compartment. "What degradation for Tako that women should discuss his heart."

His frowning face gazed down at Jane; there was on it now nothing to fascinate her; instead, his gaze inspired terror.

"We—-we said nothing else," she stammered.

"Say what you like. What is it to me? I am a man, and the clatter of women's tongues is no concern of mine."

He strode to the door. From over his shoulder he said, "What I shall do with you I have not yet decided. If Tolla is interested, tell her that."

"Tako, let me--I mean you do not understand--"

But he was gone. Jane sat trembling. A sense of defeat was on her. Worse than that, she felt that she had done us all inmeasurable harm. Tako's anger might react upon Don and me. As a matter of fact, if it did he concealed it, for we saw no change in his attitude.

Tolla rejoined Jane within a moment. If Tako spoke to her outside Jane did not know it. But she was at once aware that the other girl had been listening; Tolla's face was white and grim. She came in, busied herself silently about the room.

Jane turned from the window. "You heard us, Tolla?"

"Yes, I heard you! You with your crooked look staring at him--"

"Why, Tolla, I did not!"

"I saw you! Staring at him so that he would think you beautiful! Asking him, with a boldness beyond that of any woman I could ever imagine—asking him if he planned you for his harem!"

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She stood over Jane, staring down with blazing eyes. "Oh, I heard you! And I heard him telling you how noble are his motives! One woman, just for him!"

"But, Tolla--"

"Do not lie to me! I heard him sneering at me—telling you of this one woman just for him! And you are that woman! Hah! He thinks that now, does he? He thinks he will make you love him as I love him. As I love him! And what does he know of that! What woman's love can mean!"

"Tolla! Don't be foolish. I didn't--I never had any desire to--"

"What do your desires concern me? He thinks he will win you with tales of his conquests! A great man, this Tako, because he will devastate New York!"

This was the fury of a woman scorned. She was wholly beside herself, her words tumbling, incoherent, beyond her will, beyond her realization of what she was saying.

"A great conquest to make you love him! With his giant projector he will subdue New York! Hah! What a triumph! But it is the weapon's power, not his! He and all his army—these great brave and warlike men—why I alone with that weapon could turn—"

She stopped abruptly. The red flush of frenzied anger drained from her cheeks.

Jane leaped to her feet. "What do you mean? With that giant projector—"

But Tolla was standing frozen, with all her anger gone and horror at what she had said flooding her.
“What do you mean, Tolla?” insisted Jane, seizing her. “What could you do with that giant projector?”

“Let me go!” Tolla tried to jerk away.

“I won’t let you go! Tell me what you were going to say!”

“Let me go!” Tolla got one hand loose and struck Jane in the face. But Jane again seized the wrist. In the scuffle they overturned a chair.

“I won’t let you go until you--”

And then Tako, Don and I, hearing the uproar, burst in upon them. Jane let go her hold, and Tolla broke into sobs, and sank to the floor.

And both of them were sullen and silent under our questioning.

CHAPTER X

Weird Battleground!

“We have it going very well,” said Tako, chuckling. “Don’t you think so? Sit here by me. We will stay here for a time now.”

Tako had a small flat rock for a table. On it he had spread his paraphernalia for this battle--if battle it could be called. Weird contest! Opposing forces, each imponderable to the other so that no physical contact had yet been made. Tako sat at his rock; giving orders to his leaders who came hurrying up and were away at his command; or speaking orders into his sound apparatus; or consulting his charts and co-ordinates, questioning Don and me at times over the meaning of shadowy things we could see taking place about us.

A little field headquarters our post here might have been termed.[8]

[8] The detailed nature of the scientific devices Tako used in the handling of his army during the attack never has been disclosed. I saw him using one of the eye-telescopes. There was also a telephonic device and occasionally he would discharge a silent signal radiance--a curious intermittent green flare of light. His charts of the topography of New York City were to me incomprehensible hieroglyphics--mathematical formula, no doubt; the co-ordinates of altitudes and contours of our world-space in its relation to the mountainous terrain of his world which stood mingled here with the New York City buildings.

We were grouped now around Tako on a small level ledge of rock. It lay on a broken, steeply ascending ramp of a mountainside. The mountain terraces towered back and above us. In front, two hundred feet down, was a valley of pits and craters; and to the sides a tumbled region of alternating precipitous cliffs and valley depths.

Upon every point of vantage, for two or three miles around us, Tako's men were dispersed. To us, they were solid gray blobs in the luminous darkness. The carriers, all arrived now, stood about a mile from us, and save for their guards, the men had all left them. The weapons were being taken out and carried to various points over the mountains and in the valley depths. Small groups of men--some two hundred in a group--were gathered at many different points, assembling their weapons, and waiting for Tako's orders. Messengers toiled on foot between them, climbing, white figures. Signals flashed.

Fantastic, barbaric scene--it seemed hardly modern. Mountain defiles were swarming with white invaders, making ready, but not yet attacking.

We had had as yet no opportunity of talking alone with Jane since we left the carrier. The incident with Tolla was to us wholly inexplicable. But that it was significant of something, we knew--by Jane's tense white face and the furtive glances she gave us. Don and I were ready to seize the first opportunity to question her.

Tolla, by the command of Tako, stayed close by Jane, and the two girls were always within sight of us. They were here now, seated on the rocks twenty feet from us. And the two guards, whom Tako had appointed at the carrier, sat near us with alert weapons, watching Jane and us closely.[9]

[9] There was a thing which puzzled me before we arrived in the carrier, and surprised me when we left it; and though I did not, and still do not wholly understand it, I think I should mention it here. Traveling in the carrier we were suspended in a condition of matter which might be termed mid way between Tako's realm and our Earth-world. Both, in shadowy form, were visible to us; and to an observer on either world we also were visible.

Then, as the carrier landed, it receded from this sort of borderland as I have termed it, contacted with its own realm and landed. At once I saw that the shadowy outlines of New York were gone. And, to New York observers, the carriers as they landed, were invisible. The mountains--all this tumbled barren wilderness of Tako's world--were invisible to observers in New York.

But I knew now how very close were the two worlds--a very fraction of visible "distance," one from the other.

Then, with wires, disks and helmets--all the transition mechanism worn now by us and all of Tako's forces--we drew ourselves a very small fraction of the way toward the Earth-world state. Enough and no more than to bring it to most tenuous, most wraithlike visibility, so that we could see the shadows of it and know our location in relation to it, which was necessary to Tako's operations.
In this state, New York City was a wraith to us—and we were shadowy, dimly visible apparitions to New York observers. But in this slight transition, we did not wholly disconnect with the terrain of Tako's world. There was undoubtedly—if the term could be called scientific—a depth of field to the solidity of these mountains. By that I mean, their tangibility persisted for a certain distance toward other dimensions. Perhaps it was a greater "depth of field" than the solidity of our world possesses. As to that, I do not know.

But I do know, since I experienced it, that as we sat now encamped upon this ledge, the ground under us felt only a trifle different from when we had full contact with it. There was a lightness upon us—an abnormal feeling of weight-loss—a feeling of indefinable abnormality to the rocks. Yet, to observers in New York, we were faintly to be seen, and the rocks upon which we sat were not.

There was just once after we left the carrier, toiling over the rocks with Tako's little cortege to this vantage point on the ledge, that Jane found an opportunity of communicating secretly with us.

"Tolla told me something about the giant projector! Something about how it--"

She could say almost nothing but that. "The projector, Bob, if you can only learn how it--"

Tolla was upon us, calling to attract Tako's attention, and Jane moved away.

* * * * *

The giant projector! We had it with us now; a dozen men had laboriously carried it up here. Not yet assembled, it stood here on the ledge—a rectangular gray box about the size and shape of a coffin, encased now in the mesh of transition mechanism. Tako intended to materialize us and that box into the city when the time came, unpack and erect the projector, and with its long range dominate all the surrounding country.

Tolla had almost told Jane something about it! Jane was trying to learn that secret. Or she thought we might learn it from Tako. But of what use if we did? We were helpless, every moment under the eyes of guards whose little hand-beams could in a second annihilate us. When, leaving the carrier, Jane had appeared garbed like the rest of us and we had all been equipped with the transition mechanism which we knew well how to use now, the thought came to me of trying to escape. But it was futile. I could set the switches at my belt to materialize me into New York. But as I faded, the weapons of the guards would have been quick enough to catch me. How could Jane, Don and I simultaneously try a thing like that.

"Impossible!" Don whispered. "Don't do anything wrong. Some chance may come, later."

But with that slight transition over, Tako at once removed from our belts a vital part of the mechanism in order to make it impotent.

An hour passed, here on the ledge, with most of the activity of Tako's men incomprehensible to us.

"You shall see very soon," he chuckled grimly, "I can give the signal to attack—all at once. Look there! They grow very bold, these New York soldiers. They have come to inspect us."

* * * * *

It was night in New York City—about two A.M. of the night of May 19th and 20th. Our mountain ledge was within a store on the east side of Fifth Avenue at 36th Street. We seemed to be but one story above the pavement. The shadowy outlines of a large rectangular room with great lines of show-cases dividing it into wide aisles. I recognized it at once—a jewelry store, one of the best known in the world. A gigantic fortune in jewelry was here, some of it hastily packed in great steel safes nearby, and some of it abandoned in these show-cases when the panic swept the city a few days previously.

But the jewelry of our world was nothing to these White Invaders. Tako never even glanced at the cases, or knew or cared what sort of a store this was.

The shadowy street of Fifth Avenue showed just below us. It was empty now of vehicles and people, but along it a line of soldiers were gathered. Other stores and ghostly structures lay along Fifth Avenue. And five hundred feet away, diagonally across the avenue, the great Empire State Building, the tallest structure in the entire world, towered like a ghostly Titan into the void above us.

This ghostly city! We could see few details. The people had all deserted this mid-Manhattan now. The stores and hotels and office buildings were empty.

A group of soldiers came into the jewelry store and stood within a few feet of us, peering at us. Yet so great was the void between us that Tako barely glanced at them. He was giving orders constantly now. For miles around us his men on the mountains and in the valleys were feverishly active.

* * * * *

But doing what? Don and I could only wonder. A tenseness had gripped upon Tako. The time for his attack was nearing.

"Very presently now," he repeated. He gestured toward the great apparition of the Empire State Building so near us.

"I am sparing that. A good place for us to mount the projector—up there in that tall tower. You see where our
mountain slope cuts through that building? We can materialize with the projector at that point."

The steep ramp of the mountainside upon which we were perched sloped up and cut midway through the Empire State Building. The building's upper portion was free of the mountain whose peaks towered to the west. We could climb from our ledge up the ramp to the small area where it intersected the Empire State at the building's sixtieth to seventieth stories.

The apparitions of New York's soldiers stood in the jewelry store with futile leveled weapons.
"They are wondering what we are doing!" Tako chuckled.

A dozen of Tako's men, unheeding the apparitions, were now busy within a few hundred feet of us down the rocky slope. We saw at close view, what Tako's army was busy doing everywhere. The men had little wedge-shaped objects of a gray material. The materialization bombs! They were placing them carefully at selected points on the rocks, and adjusting the firing mechanisms. This group near us, which Don and I watched with a fascinated horror, were down in the basement of the jewelry store, among its foundations. There for a moment; then moving out under Fifth Avenue, peering carefully at the spectral outlines of the cellars of other structures.

Then presently Tako called an order. He stood for a moment on the ledge with arms outstretched so that his men, and Don and I and Jane, and the wondering apparitions of the gathered soldiers and New York Police could see him. His moment of triumph! It marked his face with an expression which was utterly Satanic.

Then he dropped his arms for the signal to attack.

CHAPTER XI
The Devastation of New York

That night of May 19th and 20th in New York City will go down in history as the strangest, most terrible ever recorded. The panics caused by the gathering apparitions of the previous days were nearly over now. The city was under martial law, most of it deserted by civilians, save for the dead who still lay strewn on the streets.

Lower and mid-Manhattan were an empty shell of deserted structures, and silent, littered streets, which at night were dark, and through which criminals prowled, braving the unknown terror to fatten upon this opportunity.

Soldiers and police patrolled as best they could all of Manhattan, trying to clear the streets of the crushed and trampled bodies; seeking in the deserted buildings those who might still be there, trapped or ill, or hurt so that they could not escape; protecting property from the criminals who en masse had broken jail and were lurking here.

Warships lay in the harbor and the rivers. The forts on Staten Island and at Sandy Hook were ready with their artillery to attack anything tangible. Airplanes sped back and forth overhead. Troops were marching from outlying points--lines of them coming in over all the bridges.

By midnight of May 19th and 20th there were groups of ghosts visible everywhere about the city. They lurked in the buildings, permeating the solid walls, stalking through them, or down through the foundations; they wandered upon invisible slopes of their own world, climbing up to gather in groups and hanging in mid-air over the city rooftops. In the Hudson River off Grant's Tomb two or three hundred of the apparitions were seemingly encamped at a level below the river's surface. And others were in the air over the waters of the upper bay.

* * * * *

Toward midnight, from the open ocean beyond Sandy Hook spectral vehicles came winging for the city. Rapidly decreasing what had at first seemed a swift flight, they floated like ghostly dirigibles over the bay, heading for Manhattan. The forts fired upon them; airplanes darted at them, through them. But the wraiths came on unheeding. And then, gathering over Manhattan at about Washington Square, they faded and vanished.

Within thirty minutes, though the vehicles never reappeared, it was seen that the spectral invaders were now tremendously augmented in numbers. A line of shapes marched diagonally beneath the city streets. Patrolling soldiers in the now deserted subways saw them marching past. The group in the air over the harbor was augmented. In Harlem they were very near the street levels, a mass of a thousand or more strung over an area of forty blocks.

In mid-Manhattan soldiers saw that Tiffany's jewelry store housed the lurking shapes. Some were lower, others higher; in this section around Fifth Avenue and Thirty-fourth Street the apparitions were at tremendously diverse levels. There were some perched high in the air more than half way up the gigantic Empire State Building; and still others off to the west were in the air fifteen hundred feet or more above the Pennsylvania Station.

* * * * *

At Tiffany's--as indeed in many other places--the soldiers made close visual contact with the apparitions. A patrolling group of soldiers entered Tiffany's and went to the second floor. They reported a seated group of "ghosts," with numbers of white shapes working near them at a lower level which brought them into Tiffany's basement.

The soldiers thought that what was seated here might be a leader. Apparitions rushed up to him, and away. And here the soldiers saw what seemed the wraiths of two girls, seated quietly together, helmeted and garbed like the men. And men seemed watching them.

By one-thirty there was great activity, constant movement of the apparitions everywhere. Doing what? No one
could say. The attack, so closely impending now, was presaged by nothing which could be understood.

There was one soldier who at about one-thirty A.M. was watching the spectres which lurked seemingly in the foundations of Tiffany's. He was called to distant Westchester where the harried Army officials had their temporary headquarters this night. He sped there on his motorcycle and so by chance he was left alive to tell what he had seen. The wraiths under Tiffany's were placing little wedge-shaped ghostly bricks very carefully at different points. It occurred to this soldier that they were putting them in spaces coincidental with the building's foundations.

And then came the attack. The materialization bombs—as we knew them to be—were fired. Progressively over a few minutes, at a thousand different points. The area seemed to be from the Battery to Seventy-second Street. Observers in circling airplanes saw it best—there were few others left alive to tell of it.

* * * * *

The whole thing lasted ten minutes. Perhaps it was not even so long. It began at Washington Square. The little ghostly wedges which had been placed within the bricks of the arch at the foot of Fifth Avenue began materializing; turning solid. From imponderability they grew tangible; demanded free empty space of their own. Wedged and pushed with solidifying molecules and atoms, each demanding its little space and finding none. Encountering other solidity.

Outraged nature! No two material bodies can occupy the same space at the same time!

The Washington Arch very queerly seemed to burst apart by a strangely silent explosion. The upper portion toppled and fell with a clatter of masonry littering the avenue and park.

Then a house nearby went down; then another. Everything seemed to be crumbling, falling. That was the beginning. Within a minute the chaos spread, running over the city like fire on strewn gasoline. Buildings everywhere came crashing down. The street heaved up, cracking apart in long jagged lines of opening rifts as though an earthquake were splitting them. The subways and tubes and tunnels yawned like black fantastic chasms crossed and littered by broken girders.

The river waters heaved with waves lashed white as the great bridges fell into them; and sucked down and closed again with tumultuous whirlpools where the water had rushed into the cracked tunnels of the river bed.

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Of the towering skyscrapers the Woolworth was the first to crumble; it split into sections as it fell across the wreckage which already littered City Hall. Then the Bank of Manhattan Building, crumbling, partly falling sideways, partly slumping upon the ruins of itself. Simultaneously the Chrysler Building toppled. For a second or two it seemed perilously to sway. Breathless, awesome seconds. It swayed over, lurched back like a great tree in a wind. Then very slowly it swayed again and did not come back. Falling to the east, its whole giant length came down in a great arc. The descent grew faster, until, in one great swoop it crashed upon the wreckage of the Grand Central Station. The roar of it surged over the city. The crash of masonry; the clatter of its myriad windows, the din of its rending, breaking girders.

The giant buildings were everywhere tumbling like falling giants; like Titans stricken by invisible tumors implanted in their vitals. It lasted ten minutes. What infinitude of horror came to proud and lordly Manhattan Island in those momentous ten minutes!

Ten thousand patrolling soldiers and police, bands of lurking criminals, and men, women and children who still had not left the city, went down to death in those ten minutes. Yet no observer could have seen them. Their little bodies, so small amid these Titans of their own creation, went into oblivion unnoticed in the chaos.

* * * * *

The little solidifying bombs of the White Invaders did their work silently. But what a roar surged up into the moonlit night from the stricken city! What tumult of mingled sounds! What a myriad of splintering, reverberating crashes, bursting upward into the night; echoing away, renewed again and again so that it all was a vast pulsing throb of terrible sound. And under it, inaudible, what faint little sounds must have been the agonized screams of the humans who were entombed!

Then the pulse of the great roaring sound began slowing. Soon it became a dying roar. A last building was toppling here and there. The silence of death was spreading over the mangled litter of the strewn city. Dying chaos of sound; but now it was a chaos of color. Up-rolling clouds of plaster dust; and then darker, heavier clouds of smoke. Lurid yellow spots showed through the smoke clouds where everywhere fires were breaking up.

And under it, within it all, the vague white shapes of the enemy apparitions stood untouched, still peering curious, awed triumphant at what they had done.

Another ten minutes passed; then half an hour, perhaps. The apparitions were moving now. The many little groups were gathering into fewer, larger groups. One marched high in the air, with faint lurid green beams slanting down at the ruins of the city; not as weapons this time, but as beams of faint light, seemingly to illuminate the scene, or perhaps as signals to the ghostly army.
The warships in the Hudson were steaming slowly toward the Battery to escape. Searchlights from them, from the other ships hovering impotent in the bay, and from a group of encircling planes, flashed their white beams over the night to mingle with the glare of the fires and the black pall of smoke which was spreading now like a shroud.

* * * * *

There were two young men in a monoplane which had helplessly circled over mid-Manhattan. They saw the city fall, and noticed the lurking wraiths untouched amid the ruins and in the air overhead. And they saw, when it was over, that one great building very strangely had escaped. The Empire State, rearing its tower high into the serene moonlight above the wreckage and the rising layers of smoke, stood unscathed in the very heart of Manhattan. The lone survivor, standing there with the moonlight shining upon its top, and the smoke gathering black around its spreading base.

The two observers in the airplane, stricken with horror at what they had seen, flew mechanically back and forth. Once they passed within a few hundred feet of the standing giant. They saw its two hundred foot mooring mast rising above the eighty-five stories of the main structure. They saw the little observatory room up there in the mooring mast top, with its circular observation platform, a balcony around it. But they did not notice the figures on that balcony.

Then, from the top of the Empire State Building—from the circular observation platform—a single, horribly intense green light-beam slanted out into the night! A new attack! As though all which had gone before were not enough destruction, now came a new assault. The spectral enemies were tangible now!

* * * * *

The single green light-beam was very narrow. But the moonlight could not fade it; over miles of distance it held visible. It struck first a passing airplane. The two observers in the monoplane were at this time down near the Battery. They saw the giant beam hit the airplane. A moment it clung, and parts of the plane faded. The plane wavered, and then, like a plummet, fell.

The beam swung. It struck a warship lying in the upper bay. Explosions sounded. Puffs of light flared. The ship, with all its passengers vanished and gone, lay gutted and empty.

The source of the light moved rapidly around the circular balcony. The light darted to every distant point of the compass. The surprised distant ships and forts, realizing that here for the first time was a tangible assailant, screamed shots into the night. But the green beam struck the ships and forts and instantly silenced them.

Now the realization of this tangible enemy spread very far. Within a few minutes, planes and radio communication had carried the news. From distant points which the light could not or did not reach, long-range guns were firing at the Empire State. A moment or two only. The base of the building was struck.

Then, frantically, observing planes sent out the warning to stop firing. The green beam had for a minute or two vanished. But now it flashed on again. What was this? The spectral wraiths of ten thousand of the enemy were staring. The observers in the planes stared and gasped. What fantasy! What new weird sight was this, stranger than all that had preceded it!

CHAPTER XII

On the Tower Balcony

Upon the little observatory balcony at the top of the Empire State some twelve hundred feet above the stricken city, Don and I were with Tako as he erected the giant projector. In the midst of the silent shadowy outline of the stricken city falling around us, we had carried the projector up the mountain slope. The spectre of the Empire State Building was presently around us; we were in a hallway of one of the upper stories. Slowly, we materialized with our burden. I recall, as the dark empty corridor of the office building came to solidity around me, with what surprise I heard for the first time the muffled reverberations from the crumbling city....

We climbed the dark and empty stairs, upward into the mooring mast. Don and I toiled with the box, under the weapons of our two guards.

It was only a few minutes while Tako assembled and mounted the weapon. It stood a trifle higher than the parapet top. It rolled freely upon a little carriage mounted with wheels. Don and I peered at it. We hovered close to Tako with only one thought in our minds, Jane's murmured words—if we could learn something about this projector....

* * * * *

Then the horror dulled us. We obeyed orders mechanically, as though all of it were a terrible dream, with only a vague undercurrent of reiterated thought: some chance must come—some fated little chance coming our way.

I recall, during those last terrible minutes when Tako flung the projector beam to send all his distant enemies hurtling into annihilation, that I stood in a daze by the parapet. Don had ceased to look. Tako was rolling the projector from one point to another around the circular balcony. Sometimes he was out of sight on the other side, with the observatory room in the mast hiding him.
We had been ordered not to move. The two guards stood with hand weapons turned on so that the faint green beams slanted downward by their feet, instantly ready, either for Don or me.

And I clung to the balcony rail, staring down at the broken city. It lay strewn and flattened as though, not ten minutes, but ten thousand years of time had crumbled it into ruins.

Then shots from the distant warships began screaming at us. With a grim smile, Tako silenced them. There was a momentary lull.

And then came our chance! Fate, bringing just one unforeseen little thing to link the chain, to turn the undercurrent of existing circumstances--and to give us our chance. Or perhaps Jane, guided by fate, created the opportunity. She does not know. She too was dazed, numb--but there was within her also the memory of what Tolla had almost said. And Tolla's frenzy of jealousy....

* * * * *

Tako appeared from around the balcony, rolling the projector. Its beam was off. He flung a glance of warning at the two guards to watch us. He left the projector, flushed, triumphant, all his senses perhaps reeling with the realization of what he had done. He saw the two girls huddled in the moonlight of the balcony floor. He stooped and pushed Tolla roughly away.

"Jane! Jane, did you see it? My triumph! Tako, master of everything! Even of you--is it not so?"

Did some instinct impel her not to repulse him? Some intuition giving her strength to flash him a single alluring moonlit glance?

But suddenly he had enwrapped her in his arms. Kissing her, murmuring love and lust....

This was our chance. But we did not know it then. A very chaos of diverse action so suddenly was precipitated upon this balcony!

Don and I cried out and heedlessly leaped forward. The tiny beams of the guards swung up. But they did not reach us, for the guards themselves were stricken into horror. The shot from a far-distant warship screamed past. But that went almost unheeded. Tako had shouted, and the guards impulsively turned so that their beams missed Don and me.

Tolla had flung herself upon Tako and Jane. Screaming, she tore at them and all in an instant rose to her feet. Tako's cylinder, which she had snatched, was in her hand. She flashed it on as Don and I reached her.

* * * * *

The guards for that instant could not fire for we were all intermingled. Don stumbled in his rush and fell upon Tako and Jane, and in a moment rose as the giant Tako lifted him and tried to cast him off.

My rush flung me against Tolla. She was babbling, mouthing frenzied laughs of hysteria. Her beam pointed downward, but as she reeled from the impact of my rush, the beam swung up; missed me, narrowly missed the swaying bodies of Tako and Don, and struck one of the guards who was standing, undecided what to do. It clung to him for a second or two, and then swung to the other guard.

The guards in a puff of spectral light were gone. Tolla stood wavering; then swung her light toward Tako and Don. But I was upon her.

"Tolla! Good God--"

"Get back from me! Back, I tell you."

I heard Jane's agonized warning from the floor. "Bob!"

Tolla's light missed my shoulder. Tako had cast Don off and stood alone as he turned toward us. Then Tolla's light-beam swung on him. I heard her eerie maddened laugh as it struck him.

A wraith of Tako was there, stricken as though numbed by surprise.... Then nothingness....

Shots from the distant warships were screaming around us. One struck the base of the building.

I clung to my scattering senses. I gripped Tolla.

"That projector--what was it you almost told Jane?"

* * * * *

She stood stupidly babbling. "Told Jane? That projector--"

She laughed wildly, and like a tigress, cast me off. "Fools of men! Tako--the fool!"

She swung into a frenzy of her own language. And then back into English. "I will show you--Tako, the fool! All those fools out there under the ground and in the sky. I will show them!"

She stooped over the projector and fumbled with the mechanism.

Don gasped, "Those apparitions--is that what you're going to attack?"

"Yes--attack them!"

The beam flashed on. But it was a different beam now. Fainter, more tenuous; the hum from it was different.

It leaped into the ground. It was a spreading beam this time. It bathed the white apparitions who were peering up at the city.
Why, what was this? Weird, fantastic sight! There was a moment of Tolla's frenzied madness; then she staggered away from the projector. But Don and I had caught the secret. We took her place. We carried it on.

We were hardly aware that the far-off warships had ceased firing. We hardly realized that Tolla had rushed for the parapet; climbed, screaming and laughing--and that Jane tried to stop her.

"Oh, Tolla, don't--"

But Tolla toppled and fell.... Her body was almost not recognized when it was later found down in the ruins.

Don and I flung this new beam into the night. We rolled the projector around the platform, hurling the beam in every direction at the white apparitions....

* * * * *

It had caught first that group which lurked in the ground near the base of the Empire State. Tolla had turned the beam to the reverse co-ordinates from those Tako used. It penetrated into the borderland, reached the apparitions and forcibly materialized them! A second or two it clung to that group of white men's shapes in the ground. They grew solid; ponderable. But the space they now claimed was not empty! Solid rock was here, yielding no space to anything! Like the little materialization bombs, this was nature outraged. The ground and the solid rock heaved up, broken and torn, invisibly permeated and strewn with the infinitesimal atomic particles of what a moment before had been the bodies of living men.

We caught with the beam that marching line of apparitions beneath the ground surface--a section of Tako's army which was advancing upon Westchester. The city streets over them surged upward. And some we caught under the rivers and within the waters of the bay, and the waters heaved and lashed into turmoil.

Then we turned the beam into the air. The apparitions lost contact with their invisible mountain peaks. And with sudden solidity, the gravity of our world pulled at them. They fell. Solid men's bodies, falling with the moonlight on them. Dark blobs turning end over end; plunging into the rivers and the harbor with little splashes of white to mark their fall; and yet others whirling down, crashing into the wreckage of masonry, into the pall of smoke and the lurid yellow flames of the burning city.

The attack of the White Invaders was over.

* * * * *

A year has passed. There has been no further menace; perhaps there never will be. And again, the invisible realm of which Don, Jane and I were vouchsafed so strange a glimpse, lies across a void impenetrable. Earth scientists have the projector, with its current batteries apparently almost exhausted. And they have the transition mechanism which we three were wearing. But of those, the vital element had been removed by Tako--and was gone with him. Many others were found on the bodies, and upon the body of poor Tolla. But all were wrecked by their fall.

Perhaps it is just as well. Yet, often I ponder on that other realm. What strange customs and science and civilization I glimpsed.

Out of such thoughts one always looms upon me: a contemplation of the vastness of things to be known.

And the kindred thought: what a very small part of it we really understand!

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Contents

THE ETHICAL WAY
By Joseph Farrell

There is a way around every tabu, knock on wood--but just watch out that the wood doesn't knock back!

"Is it time?" Jarth Rolan asked anxiously. Pilot Lan Barda pushed him gently back into a seat. "No, but very soon. And be calm--you're jumpier than a human."

"But we've waited so long--yes, a long time. And I am anxious to get home."

Lan peered calmly out of his vehicle. They were hovering in Earth's upper atmosphere, at the permitted limit.

"Be patient. These people have almost reached the critical point. We'll get the signal before long."

Jarth Rolan popped out of his chair and danced about in nervous excitement.

"Won't it be dangerous? For us, I mean. Going down into that radioactive atmosphere. And how about them--will any of them live? Suppose we wait too long?"

Lan Barda laughed. He was a husky humanoid, pinkish of skin and completely hairless, like all galactics. He slapped Jarth Rolan's back.
"We have experts watching. These humans have used four cobalt bombs, and plenty of smaller stuff. The fallout is close to the danger point. Our observers will know just when we can move in because--" he winked and his voice dropped to a conspiratorial whisper--"they're using automatically controlled instruments."

"Oh, my!" Jarth Rolan clapped his hands to his cheeks. "But those are robots--and the use of robots is against religion."

"I know, Jarth. But we won't be using them much longer, will we?" He poked a playful finger into Jarth's ribs. "We'll have slaves--and it'll be completely ethical."

Jarth Rolan winced. "Must you use that word 'slaves,' Lan? It sounds so--" He waved his hands.

Lan laughed again. "Be honest with yourself, Jarth. You're out to make a few dopolins for yourself as a slave raider."

"An entrepreneur," said Jarth. "In personal services."

Lan Barda became serious. "There's the signal--it's time to go down. Let's go, Jarth, before somebody else gets them all."

* * * * *

An hour later, it was Lan Barda's turn to be nervous. He watched a needle creep into the red zone.

"Hurry, Jarth. We've been on this planet long enough. That fifth cobalt bomb is sending the index up fast. Can't you skip these last few?"

"Oh, no. Very unethical to leave these three here to die. Must take a small chance, you know. Besides, see the sign on that taxi--just married. A fine young couple. And a fine young taxi driver. Couldn't sleep if I didn't help these three."

"Couldn't sleep thinking of the profit you'd passed up. Here, let me take that one. We have to get out of here fast."

Jarth Rolan fluttered anxiously about the pilot until they were safely above the poisoned atmosphere.

"How many?" he asked. "Did we fill the ship?"

Lan Barda checked off items on his clipboard. "A thousand and three, with these last ones. You'll make a good profit."

"Not so much the profit. Oh, no. More than that involved. Ethics and religion, Lan. Yes. With all these slav--servants, our people will never have to use robots. They'll be relieved of routine labor and can devote their lives to art and science. And it's all ethical--oh, yes, for these people were doomed."

"Want to know something, Jarth?" Lan Barda bent closer and whispered wickedly. "This ship has automatic controls. Has to. No living being has fast enough reactions to handle an interstellar ship. All robot driven, at least in part."

"Robots! May we be forgiven!" Jarth stared suspiciously at Lan Barda. "Sometimes, Lan, I think you are an agnostic."

The pilot became more serious. "Maybe, Jarth. In our work, we must use robots. We joke about it, but it goes against all galactic belief to let a machine think for us. Maybe that's why we pilots are so cynical."

"A galactic is always ethical," said Jarth Rolan solemnly. "This affair, for example. We let these poor creatures of Earth handle their own affairs with no interference until they doomed themselves. It was unethical to intervene a minute sooner. Yes--the ethical way and I feel better for it and proud to be a galactic."

"That's true," said Lan Barda. "A galactic wouldn't feel right, being a member of the dominant race of the Galaxy, if he didn't help the less fortunate."

* * * * *

Jarth Rolan had prepared a center on his estate for the slaves. The demand was greater than the supply. He chatted happily with his wife.

"An excellent investment, Shalla--yes. And the highest group council wants us to lease them out by the day for the present instead of selling outright."

She nodded. "That's the fair way. Everybody can have a turn having a slave."

"And," said Jarth, rubbing his pink hands, "we'll collect every day and still hold title."

"Will they multiply fast," asked Shalla, "so there will be enough for all?"

"They always did on Earth. Yes. By the time we pass our estate on to our son, this investment will have multiplied in value."

At the center, the slaves clustered about the bulletin boards to read the slave code. The three who had been brought aboard last stood together. Laurent Crotier and his wife Jean were still in their wedding clothes, and Sam the taxi driver was in uniform. They read the seven articles of the slave code.

"We have to work twelve hours a day," Laurent observed. "And have off every seventh day. This could be worse."
"We'll keep our eyes open and wait for our chance," Sam piped up. "Some day we'll make a break out of here."
"Yeah," said Jean. "And remember, Frenchy, no kids."

Nine months later, Laurent, Jr., was born. Before the blessed event, Laurent went to Jarth Rolan with a complaint.

"She can't do it, work twelve hours a day now. You have to change the rules. By gar, if my wife die 'count of this, I goin' kill you, Jarth Rolan."

Jarth Rolan waltzed about nervously, biting his fingernails.

"No, we do not want her to have trouble. No. She will need proper rest. There is a meeting of the highest group council right now, concerning this. Others have the same problem. But yes, I will relieve her of work without waiting for the council's decision. Tell your wife to stay home, Laurent, until the baby is born."

Laurent pushed his luck. "And after that, too. A kid got to have a mother. I do the work for three, you let my wife take care of the family."

"Oh, this is a problem!" Jarth Rolan rubbed his fingers unhappily over his bald scalp. "Some of the other females are in the same condition. But it is like planting a crop--one labors hard at the beginning to reap a great harvest later. We will work this out."

The next day, fifteen articles amending the code arrived and were posted. Laurent read happily.

"Now," he said to Jean, "it is the law. You will stay home and have the baby."

"And for such further period," she read, "as is considered necessary.' You sure told him off, Frenchy."

She squeezed his arm affectionately and his chest went out a little.

"And remember," she said, "this is the last one."

"Look at this rule," said Sam. "All kids must be educated. I'm only--" he winked at them--"thirteen. It's off the job and back to school for me."

Laurent blinked. "By gar, Sam, I think you been shaving pretty near as long as I am. But if Jarth Rolan ask me, I say I know Sam is thirteen."

Jarth Rolan came along to explain the amendments.

"We don't want the slaves to be ignorant. Oh, no. It will be worth extra effort and expense to reap the harvest. The slaves will work at many specialized tasks. Even personal servants will read and write letters and help at business and keep accounts--yes, indeed. We must assign some slaves to teaching."

* * * * *

About the time Laurent, Jr., started school, Laurent led a delegation to Jarth Rolan.

"We got some complaint to make. These food servings pretty small lately. We work hard, we have to eat more."

Jarth Rolan's facial skin had developed wrinkles, though the galactics' life span was comparable to a human's and he was only about forty. He fidgeted.

"I am sorry--oh, yes. Sorry. There have been delays in food shipments--the same trouble all over. Too many excused from the work force, you know. Most of the women are pregnant or have children, and teachers and special assignments--but things will improve, believe me. Yes. You will soon find an improvement. Yes--very soon."

The delegation talked it over outside Jarth Rolan's house.

"He's been letting himself go," said a woman. "Did you notice how thin he's become? And the same with his family."

Laurent reflected. "To raise a lot of kids is hard. My father, he work like hell all the time. Raise his own food, don't depend on nobody. I think that land back of the center, we should plough it up and put in some potatoes."

"On our own time?" Sam exclaimed.

Laurent chuckled. "Well, Sam, you got no kids--you just a young boy eighteen years old. By gar, I think you have gray hair when you twenty-one."

The others joined the laughter. Sam's lie about his age had boomeranged--he had been kept in school and denied permission to marry until he was officially eighteen, a few months ago.

Laurent fingered his chin thoughtfully. "I think we look over that land. Maybe we get some time out from our regular work, we do some farming."

Before the blowup on Earth, the galactics had made occasional landings to gather animals and seeds of food plants. Certain centers were put under government control to grow food for the slaves. The people at Jarth Rolan's center saw that this arrangement was breaking down because of the increasing slave population and the diversion of labor to child raising. They looked over the piece of land and Laurent okayed it. They went back to Jarth Rolan. He approved at once.

"Oh, indeed. I can obtain all the equipment you'll need. Get started right away. We can grow a good part of our own food. Yes. I am sure it will work out."
"We goin' need some time for work the farm," Laurent pointed out.

"Oh? I thought maybe in your spare time--"

"You want to kill us?" Sam demanded. "Put us on an extra job after working us hard twelve hours a day?"

"But--there's so little coming in. Still, maybe you're right. Worth the extra trouble and expense now. Building for the future--that's the idea."

Jarth Rolan notified his group leader of the arrangement and it percolated swiftly up through the hierarchy to the council of the highest group heads, who directed policy for the entire Galaxy. There were nine of them and they talked over this development.

"I approve. We should have done it this way from the beginning."

"Of course. But certain advocates of government control insisted on public ownership of the food farms--"

"What do you mean, certain advocates? If you mean me, be galactic enough to say so."

"I intend no personal offense to anybody. But there is bound to be inefficiency in any government project--"

The chairman pounded the table. "Stay with the subject. It has been suggested that each center grow part of its food. I am in favor."

"But it cuts down the available labor force. We're having complaints now about the shortage of slaves--"

"Think of the future. I admit the present situation is difficult. It's like raising a herd of prize cattle--all expense and no profit at first. Then the herd is built up and suddenly you're rich."

"But we're putting so much into it--"

"The more we put in, the more we take out. And they're multiplying rapidly. Remember our new goal of two slaves for each galactic--one for the day shift and one for the night. It's the only way our people can live a decent life, freed from routine labor, devoting themselves to art and science."

"That's right. We work so our children can lead the better life. It's worth some sacrifice."

The chairman stood up. "Most of us seem willing to endure a little hardship now for the benefit of our children. I suggest we endorse this new procedure."

Laurent, Jr., married the girl next door. Laurent celebrated the wedding with a barrel of beer he had brewed on the farm. Sam became glassy-eyed and lectured the young couple.

"Just wait for the right time. Rise up and capture their spaceships. That's what we'll do. We'll go back to Earth and then let them try to get us off it again."

"But Earth is dead," Laurent, Jr., objected. "We can't live there. Poisonous radiation."

"By gar!" Laurent drained another brew. "You believe everything they tell you, hah? We goin' show them sometime. Like Sam says, not now, but sometime. Maybe me and Sam don't do it, but don't you kids forget--you not goin' be slaves always. You watch for the right time, like Sam says."

His son looked dubious. "But what you told me about Earth doesn't sound so good. Like the way you were so cold and hungry in that shack in Canada. And Mama walking up five flights in New York after working all day in the garment factory. And all those wars! Why did you people spend half your time shooting each other, Dad?"

Laurent belched indignantly. "By gar, boy! We was free! We don't have no galactic stand over us, do this, do that. We was free!"

"We don't work so hard," said his son. "And look at old Jarth Rolan and the others out there--they've given us the day off, but the galactics are all busy in the fields. Everybody has to work, Dad."

Laurent looked through a slight haze at the masters laboring in the potato fields. Farm work and teaching and other special assignments had created a shortage of personal slaves. Jarth Rolan gave preference in leasing slaves to those who came and helped him at the center.

Since having a personal slave was a mark of prestige among the galactics, many of those laboring on the farm were from the highest levels of society.

"They don't know nothing about raise potatoes," Laurent grumbled. "We put in complaint, by damn. We want each one have his own land. I work like jackass, I want to get paid for it."

The highest group council was in session. One member was explaining: "It's the custom of tipping slaves. At first, those who could get a slave were so happy that they often gave him a few coins. Now the custom is firmly established--anybody who doesn't tip a slave is considered cheap. I do it and so do you."

"Of course. What's wrong with giving them a few polins now and then? Or a dopolin or two when they have a baby or a wedding?"

"Nothing wrong with it, in itself. But they don't spend anything. We supply their food and clothing; nothing else we have seems to appeal to them. The money goes out of circulation. It's estimated that half the money in the
Galaxy is being hoarded by slaves."
"What? That's impossible. Just from those small tips?"
"Small tips, but day after day; year after year. Add up some time what you've given and multiply by the number who've been doing it."
"Then that's behind our economic troubles. A currency shortage. Can we take it away from them?"
"Of course not. Besides being unethical, it would turn them against us. They wouldn't understand."
"Then we'll abolish tipping."
"Too late. What we need is an ethical way of getting back that currency."
A new member spoke: "I understand that on Earth these slaves were often addicted to alcohol, gambling and various alkaloids. Perhaps we could introduce these items, under government control, of course--"
He stopped. Eight pair of eyes were blazing at him.
"You're new here," the chairman said. "If you ever make another suggestion like that--"
They pondered. The chairman fingered some papers.
"Here's a suggestion. The slaves have been petitioning for the right to own land. It seems to be the only thing they'll spend their money for."
"Impossible!"
"But maybe--"
"We could limit the holdings."
"And have the land subject to condemnation by the government at a fair price."
The chairman called for order. "Let's argue this out. Remember the slaves will need time to work their land. Since their work day is down to nine hours, we'll have to arrange something."
* * * * *
Jean had been complaining about the lumps in the mattress. When Laurent took them out, there was enough in galactic currency to buy a piece of land in his name and hers, plus a plot for each of the children, and a new mattress as well. Sam was suspicious.
"They're out to get what little we've been able to save, Laurent. They can take the land anytime--for what they call a fair price. Fair! Fine chance they'll be fair about it."
But Laurent kept the land and was even able to buy a piece for each grandchild, although they arrived faster and faster as his own large family grew up and married. One day Jean called him to a new house at the edge of the widely expanded center to see the latest arrival.
Laurent poked a finger at the squalling creature. "So I'm another grandpa. Which one this?"
"This time you're a great-grandpa, Frenchy. This is Laurent 4th."
"You mean we gettin' that old? By damn! Well, I'm buy him a piece of land, too. So much new building, this land be worth plenty when he grows up."
The 512th amendment permitted slaves to retire at 65. Laurent was a leading real estate dealer by that time. He had twenty-three children and more grandchildren than he could count. The center was grown to a city, its main street running through what had been his first farm. Sometimes Laurent relaxed in his rocking chair and needled Sam.
"By gar, Sam, if you not the oldest-looking man of fifty-five I ever see. I think you a hundred years old when you retire. When you havin' that revolution?"
"The day will come if we keep after the young ones. But damn it, Laurent, it's hard to talk any sense into them. Some of them can't even understand me."
"Well, they all talk galactic, Sam. My grandson, he call himself Loran Kotay. But these young people, they have to live their own lives. Hey, look at old Jarth Rolan up there, washing his windows. Old guy should retire, Sam. I'm goin' see a couple of my boys give him a hand."
* * * * *
But Jarth Rolan died before he could afford to retire and was replaced by his only grandson, Jarro Kogar. Laurent and Jean passed on shortly after, leaving nearly four hundred descendants.
Jarro Kogar was a newly married galactic in his early thirties. He moved into the mansion and talked things over with his wife.
"Don't see how we can afford a child right now. Wouldn't be fair to the child. Things will improve in a few years."
"Of course," she said. "We're young--we'll have time to start our family. If we wait, we'll be able to give them more."
They held similar conversations later and one day realized it was too late. Jarro Kogar died in his sixties. His widow directed the center for several more years. The slaves liked her and took good care of her. She left them the
estate when she died.

Loran Krotalu protested to the authorities that the slaves didn't want the estate. But the group heads ruled it legal under amendment 1,486, especially since no relatives could be located.

Loran left the center and moved to another city where he found a galactic couple who wanted a slave. He and his family served the galactic couple for many years. This couple, like Jarro Kogar and his wife, were childless and when they both died, Loran and his wife were very grieved.

After the funeral, Loran went into the city. He returned hours later, tired and depressed.

"It's no use," he told his wife. "There's not an unattached galactic in the area. We might get a few hours work a week with one, but we can't have one to ourselves."

"But, Loran, everybody in our set works for a galactic!"

"I know," he said miserably. "But it's no use. There must be fifty slaves for every galactic. I've taken a job at the spaceship factory. It's the best I can do."

* * * * *

Membership on the highest group council had become a killing job. Chief problem was the revision of the slave code, which had 3,697 articles. After trying for years to simplify the code, the council members called in Loran Krovalo to fill a vacancy and take over the job.

Loran was known and liked by galactic and slave alike for his brilliant essays on the master-slave relationship. While he was on the council, the Cerberan affair broke out. The Cerberans, an intelligent saurian race from a globular cluster, exploded into the Galaxy in vast numbers. Military action became necessary.

"We can handle them," Loran told the council. "Our factories are mobilized and we have any number of spacemen. We have robot instruments for fighting that are better than anything they have. We can carry the war to their home planets."

Some of the galactics objected.

"But the use of robots is forbidden. We can't fight the Cerberans with robot-controlled weapons."

"Don't worry, sir," Loran said kindly. "We slaves will take care of it. Our form of religion doesn't prohibit robots unless they are in the shape of a man. We think of real robots as being human in shape."

One of the galactics rose.

"I know you're right, but my conscience won't let me vote for robots in any form. Therefore I am resigning from the council."

A second rose, then a third and fourth. They looked at each other, and one spoke for the group.

"We are also resigning. I suggest that four slaves be appointed in our places for the duration of the war. Then they will have a majority and no galactic need violate his conscience by voting for the use of robots."

The Cerberans were crushed, but the infested area was huge and the invasion of the globular cluster took time. The war emergency lasted fifty years. When it was over, the slaves called on the galactics to take back control of the government.

But the widespread use of robot mechanisms in the war had caused a reaction among the galactics. Their consciences simmered and a wave of orthodoxy swept over their race. There was difficulty in persuading galactics to leave their home planets to sit on the council, because faster-than-light ships used robot controls.

The slaves scoured the planet that housed the council and kept two or three seats filled with galactics for a while. But they were generally old, and they died, and most of them were unmarried or childless.

* * * * *

Loran Cotay, twelfth-generation slave, sat in his home chatting with a friend from far-off Pornalu VI. Being in the space-shipping business, he had many friends throughout the Galaxy.

His wife answered the door and a pink humanoid shuffled in, mumbling greetings, and went into the other room. He was middle-aged, studious and bespectacled, and he wore a wig. Loran's friend watched him curiously.

"Haven't seen one of them in years, Loran. We have a reservation for the poor devils on my planet. Don't reproduce very fast, you know, and they may become extinct. Too bad--they're so likable. Always so ethical and conscientious."

"I know." Loran nodded. "We let poor Vendro make a few dopolins tutoring our son. He's very intelligent and a good teacher. I like to help them all I can--the only ethical thing to do. I wouldn't feel like a slave if I didn't give poor Vendro a break."

"That's true," said his friend. "A slave wouldn't feel right, being a member of the dominant race of the Galaxy, if he didn't help the less fortunate."
ATOM DRIVE
By Charles Fontenay

It was a race between the tortoise and the hare. But this hare was using some dirty tricks to make sure the ending would be different....

The two spaceship crews were friendly enemies, sitting across the table from each other for their last meal before blastoff. Outside the ports, the sky was nothing but light-streaked blackness, punctured periodically by Earth glare, for Space Station 2 whirled swiftly on its axis, creating an artificial gravity.

"Jonner, I figured you the last man ever to desert the rockets for a hot-rod tow-job," chided Russo Baat, captain of the Mars Corporation's gleaming new freighter, Marsward XVIII. Baat was fat and red-faced, and one of the shrewdest space captains in the business.

Jonner Jons, at the other end of the table, inclined his grizzled head and smiled.
"Times change, Russo," he answered quietly. "Even the Mars Corporation can't stop that."

"Is it true that you're pulling five thousand tons of cargo, Captain?" asked one of the crewmen of the Marsward XVIII.

"Something like that," agreed Jonner, and his smile broadened. "And I have only about twice the fuel supply you carry for a 100-ton payload."

The communicator above them squawked and blared:
"Captain Jons and Captain Baat of Martian competition run, please report to control for final briefing."

"I knew it!" grumbled Baat, getting heavily and reluctantly to his feet. "I haven't gotten to finish a meal on this blasted merry-go-round yet."

In the space station's control section, Commander Ortega of the Space Control Commission, an ascetic officer in plain blues, looked them up and down severely.

"As you know, gentlemen," he said, "blastoff time is 0600. Tonnage of cargo, fuel and empty vessels cannot be a factor, under the law. The Mars Corporation will retain its exclusive franchise to the Earth-Mars run, unless the ship sponsored by the Atom-Star Company returns to Earth with full cargo at least twenty hours ahead of the ship sponsored by the Mars Corporation. Cargo must be unloaded at Mars and new cargo taken on. I do not consider the twenty-hour bias in favor of the Mars Corporation a fair one," said Ortega severely, turning his gaze to Baat, "but the Space Control Commission does not make the laws. It enforces them. Docking and loading facilities will be available to both of you on an equal basis at Phobos and Marsport. Good luck."

He shook hands with both of them.

"Saturn, I'm glad to get out of there!" exclaimed Baat, mopping his brow as they left the control section. "Every time I take a step, I feel like I'm falling on my face."

"It's because the control section's so close to the center," replied Jonner. "The station's spinning to maintain artificial gravity, and your feet are away from the center. As long as you're standing upright, the pull is straight up and down to you, but actually your feet are moving faster than your head, in a larger orbit. When you try to move, as in normal gravity, your body swings out of that line of pull and you nearly fall. The best corrective, I've found, is to lean backward slightly when you start to walk."

As the two space captains walked back toward the wardroom together, Baat said:

"Jonner, I hear the Mars Corporation offered you the Marsward XVIII for this run first, and you turned them down. Why? You piloted the Marsward V and the Wayward Lady for Marscorp when those upstarts in the Argentine were trying to crack the Earth-Mars run. This Atom-Star couldn't have enough money to buy you away from Marscorp."

"No, Marscorp offered me more," said Jonner, soberly now. "But this atomic drive is the future of space travel, Russo. Marscorp has it, but they're sitting on it because they've got their fingers in hydrazine interests here, and the atom drive will make hydrazine useless for space fuel. Unless I can break the franchise for Atom-Star, it may be a hundred years before we switch to the atom drive in space."

"What the hell difference does that make to you?" asked Baat bluntly.

"Hydrazine's expensive," replied Jonner. "Reaction mass isn't, and you use less of it. I was born on Mars, Russo. Mars is my home, and I want to see my people get the supplies they need from Earth at a reasonable transport cost, not pay through the nose for every packet of vegetable seed."

They reached the wardroom door.
"Too bad I have to degrav my old chief," said Baat, chuckling. "But I'm a rocket man, myself, and I say to hell with your hot-rod atom drive. I'm sorry you got deflected into this run, Jonner; you'll never break Marscorp's orbit."

The Marsward XVIII was a huge vessel, the biggest the Mars Corporation ever had put into space. It was a collection of spheres and cylinders, joined together by a network of steel ties. Nearly 90% of its weight was fuel, for the one-way trip to Mars.

Its competitor, the Radiant Hope, riding ten miles away in orbit around the Earth, was the strangest looking vessel ever to get clearance from a space station. It looked like a tug towing a barge. The tug was the atomic power plant. Two miles behind, attached by a thin cable, was the passenger compartment and cargo.

On the control deck of the Radiant Hope, Jonner gripped a microphone and shouted profane instructions at the pilot of a squat ground-to-space rocket twenty miles away. T'an Li Cho, the ship's engineer, was peering out the port at the speck of light toward which Jonner was directing his wrath, while Qoqol, the Martian astrogator, worked at his charts on the other side of the deck.

"I thought all cargo was aboard, Jonner," said T'an.
"It is," said Jonner, laying the mike aside. "That G-boat isn't hauling cargo. It's going with us. I'm not taking any chances on Marscorp refusing to ferry our cargo back and forth at Mars."

"Is plotted, Jonner," boomed Qoqol, turning his head to peer at them with huge eyes through the spidery tangle of his thin, double-jointed arms and legs. He reached an eight-foot arm across the deck and handed Jonner his figures. Jonner gave them to T'an.

"Figure out power for that one, T'an," ordered Jonner, and took his seat in the cushioned control chair.

T'an pulled a slide rule from his tunic pocket, but his black almond eyes rested quizzically on Jonner.

"It's four hours before blastoff," he reminded.

"I've cleared power for this with Space Control," replied Jonner. "That planet-loving G-boat jockey missed orbit. We'll have to swing out a little and go to him."

On a conventional space craft, the order for acceleration would have sent the engineer to the engine deck to watch his gauges and report by intercom. But the Radiant Hope's "engine deck" was the atomic tug two miles ahead, which T'an, in heavy armor, would enter only in emergencies. He calculated for a moment, then called softly to Jonner:

"Pile One, in ten."
"In ten," confirmed Jonner, pulling a lever on the calibrated gauge of the radio control.
"Pile Two, in fifteen."
"In fifteen."
"Check. I'll have the length of burst figured for you in a jiffy."

A faint glow appeared around the atomic tug far ahead, and there was the faintest shiver in the ship. But after a moment, Qoqol said in a puzzled tone:

"No Gs, Jonner. Engine not work?"

"Sure, she's working," said Jonner with a grin. "You'll never get any more G than we've got now, Qoqol, all the way to Mars. Our maximum acceleration will be 1/3,000th-G."

"One three-thousandth?" exclaimed T'an, shaken out of his Oriental calm. "Jonner, the Marsward will blast away at one or two Gs. How do you expect to beat that at 1/3,000th?"

"Because they have to cut off and coast most of the way in an elliptic orbit, like any other rocket," answered Jonner calmly. "We drive straight across the system, under power all the time. We accelerate half way, decelerate the other half."

"But 1/3,000th!"

"You'll be surprised at what constant power can do. I know Baat, and I know the trick he's going to use. It's obvious from the blastoff time they arranged. He's going to tack off the Moon and use his power right to cut 20 days off that regular 237-day schedule. But this tug-boat will make it in 154 days!"

They took aboard the 200-ton landing boat. By the time they got it secured, the radio already was sounding warnings for blastoff.

Zero hour arrived. Again Jonner pulled levers and again the faint glow appeared around the tail of their distant tug. Across space the exhaust of the Marsward XVIII flared into blinding flame. In a moment, it began to pull ahead visibly and soon was receding like a meteor.

Near the Radiant Hope, the space station seemed not to have changed position at all.

"The race is not always to the swift," remarked Jonner philosophically.

"And we're the tortoise," said T'an. "How about filling us in on this jaunt, Jonner?"

"Is should, Jonner," agreed Qoqol. "T'an know all about crazy new engine, I know all about crazy new orbit.
Both not know all. You tell."

"I planned to, anyway," said Jonner. "I had figured on having Serj in on it, but he wouldn't understand much of it anyhow. There's no use in waking him up."

Serj was the ship's doctor-psychologist and fourth member of the crew. He was asleep below on the centerdeck.

"For your information, Qoqol," said Jonner, "the atomic engine produces electrical energy, which accelerates reaction mass. Actually, it's a crude ion engine. T'an can explain the details to you later, but the important thing is that the fuel is cheap, the fuel-to-cargo ratio is low and constant acceleration is practical.

"As for you, Tan, I was surprised at your not understanding why we'll use low acceleration. To boost the engine power and give us more Gs, we'd either have to carry more fuel or coast part of the way on momentum, like an ordinary rocket. This way's more efficient, and our 63-day margin over the Marsward each way is more than enough for unloading and loading more cargo and fuel."

"With those figures, I can't see how Marscorp expects to win this competition," said T'an.

"We've got them, flat, on the basis of performance," agreed Jonner. "So we'll have to watch for tricks. I know Marscorp. That's why I arranged to take aboard that G-boat at the last minute. Marscorp controls all the G-boats at Marsport, and they're smart enough to keep us from using them, in spite of the Space Control Commission. As for refueling for the return trip, we can knock a chunk off of Phobos for reaction mass."

The meteor alarm bells clanged suddenly, and the screen lit up once with a fast-moving red line that traced the path of the approaching object.

"Miss us about half a mile," said Jonner after a glance at the screen. "Must be pretty big... and it's coming up!"

He and T'an floated to one of the ports, and in a few moments saw the object speed by.


The radio blared: "All craft in orbit near Space Station 2! Warning! All craft near Space Station 2! Experimental missile misfired from White Sands! Repeat: experimental missile misfired from White Sands! Coordinates...."

"Fine time to tell us," remarked T'an drily.

"Experimental missile, hell!" snorted Jonner, comprehension dawning. "Qoqol, what would have happened if we hadn't shifted orbit to take aboard that G-boat?"

Qoqol calculated a moment.

"Hit our engines," he announced. "Dead center."

Jonner's blue eyes clouded ominously. "Looks like they're playing for keeps this time, boys."

* * * * *

The brotherhood of spacemen is an exclusive club. Any captain, astrogator or engineer is likely to be well known to his colleagues, either personally or by reputation.

The ship's doctor-psychologist is in a different category. Most of them sign on for a few runs for the adventure of it, as a means of getting back and forth between planets without paying the high cost of passage or to pick up even more money than they can get from lucrative planetbound practice.

Jonner did not know Serj, the Radiant Hope's doctor. Neither T'an nor Qoqol ever had heard of him. But Serj appeared to know his business well enough, and was friendly enough.

It was Serj's first trip and he was very interested in the way the ship operated. He nosed into every corner of it and asked a hundred questions a day.

"You're as inquisitive as a cadet spaceman, Serj," Jonner told him on the twenty-fifth day out. Everybody knew everyone else well by then, which meant that Jonner and Qoqol, who had served together before, had become acquainted with T'an and Serj.

"There's a lot to see and learn about space, Captain," said Serj. He was a young fellow, with fair hair and an easy grin. "Think I could go outside?"

"If you keep a lifeline hooked on. The suits have magnetic shoes to hold you to the hull of the ship, but you can lose your footing."

"Thanks," said Serj. He touched his hand to his forehead and left the control deck.

Jonner, near the end of his eight-hour duty shift, watched the dials.

The red light showing the inner airlock door was open blinked on. It blinked off, then the outer airlock indicator went on, and off.

A shadow fell across Jonner briefly. He glanced at the port and reached for the microphone.

"Careful and don't step on any of the ports," he warned Serj. "The magnetic soles won't hold on them."

"I'll be careful, sir," answered Serj.

No one but a veteran spaceman would have noticed the faint quiver that ran through the ship, but Jonner felt it. Automatically, he swung his control chair and his eyes swept the bank of dials.
At first he saw nothing. The outer lock light blinked on and off, then the inner lock indicator. That was Serj coming back inside.

Then Jonner noted that the hand on one dial rested on zero. Above the dial was the word: "ACCELERATION."

His eyes snapped to the radio controls. The atomic pile levers were still at their proper calibration. The dials above them said the engines were working properly.

The atomic tug was still accelerating, but passengers and cargo were in free fall.

Swearing Jonner jerked at the levers to pull out the piles aboard the tug.

A blue flash flared across the control board, momentarily blinding him. Jonner recoiled, only his webbed safety belt preventing him from plummeting from the control chair.

He swung back anxiously to the dials, brushing futilely at the spots that swam before his eyes. He breathed a sigh of relief. The radio controls had operated. The atomic engines had ceased firing.

Tentatively, cautiously, he reversed the lever. There was no blue flash this time, but neither did the dials quiver.

He swore. Something had burned out in the radio controls. He couldn't reverse the tug.

He punched the general alarm button viciously, and the raucous clangor of the bell sounded through the confines of the ship. One by one, the other crew members popped up to the control deck from below.

He turned the controls over to Qoqol.

"Take readings on that damn tug," Jonner ordered. "I think our cable broke. T'an, let's go take a look."

When they got outside, they found about a foot of the one-inch cable still attached to the ship. The rest of it, drawn away by the tug before Jonner could cut acceleration, was out of sight.

"Can it be welded, T'an?"

"It can, but it'll take a while," replied the engineer slowly. "First, we'll have to reverse that tug and get the other end of that break."

"Damn, and the radio control's burned out. I tried to reverse it before I sounded the alarm. T'an, how fast can you get those controls repaired?"

"Great space!" exclaimed T'an softly. "Without seeing it, I'd say at least two days, Jonner. Those controls are complicated as hell."

They re-entered the ship. Qoqol was working at his diagrams, and Serj was looking over his shoulder. Jonner took a heat-gun quietly from the rack and pointed it at Serj.

"You'll get below, mister," he commanded grimly. "You'll be handcuffed to your bunk from here on out."

"Sir?... I don't understand," stammered Serj.

"Like hell you don't. You cut that cable," Jonner accused.

Serj started to shrug, but he dropped his eyes.

"They paid me," he said in a low tone. "They paid me a thousand solars."

"What good would a thousand solars do you when you're dead, Serj ... dead of suffocation and drifting forever in space?"

Serj looked up in astonishment.

"Why, you can still reach Earth by radio, easy," he said. "It wouldn't take long for a rescue ship to reach us."

"Chemical rockets have their limitations," said Jonner coldly.

"And you don't realize what speed we've built up with steady acceleration. We'd head straight out of the system, and nothing could intercept us, if that tug had gotten too far before we noticed it was gone."

He jabbed the white-faced doctor with the muzzle of the heat-gun.

"Get below," he ordered. "I'll turn you over to Space Control at Mars."

When Serj had left the control deck, Jonner turned to the others. His face was grave.

"That tug picked up speed before I could shut off the engines, after the cable was cut," he said. "It's moving away from us slowly, and at a tangent. And solar gravity's acting on both bodies now. By the time we get those controls repaired, the drift may be such that we'll waste weeks maneuvering the tug back."

"I could jet out to the tug in a spacesuit, before it gets too far away," said T'an thoughtfully. "But that wouldn't do any good. There's no way of controlling the engines, at the tug. It has to be done by radio."

"If we get out of this, remind me to recommend that atomic ships always carry a spare cable," said Jonner gloomily. "If we had one, we could splice them and hold the ship to the tug until the controls are repaired."

"Is cable in cargo strong enough, Jonner?" asked Qoqol.

"That's right!" exclaimed Jonner, brightening. "Most of our cargo's cable! That 4,000-ton spool we're hauling back there is 6,000 miles of cable to lay a television network between the Martian cities."

"Television cable?" repeated T'an doubtfully. "Will that be strong enough?"

"It's bound in flonite, that new fluorine compound. It's strong enough to tow this whole cargo at a couple of Gs. There's nothing aboard this ship that would cut off a length of it--a heat-gun at full power wouldn't even scorch it--"
but we can unwind enough of it, and block the spool. It'll hold the ship to the tug until the controls can be repaired, then we can reverse the tug and weld the cable."

"You mean the whole 6,000 miles of it's in one piece?" demanded T'an in astonishment.

"That's not so much. The cable-laying steamer Dominia carried 3,000 miles in one piece to lay Atlantic cables in the early 20th century."

"But how'll we ever get 4,000 tons in one piece down to Mars?" asked T'an. "No G-boat can carry that load."
Jonner chuckled.

"Same way they got it up from Earth to the ship," he answered. "They attached one end of it to a G-boat and sent it up to orbit, then wound it up on a fast winch. Since the G-boat will be decelerating to Mars, the unwinding will have to be slowed or the cable would tangle itself all over Syrtis."

"Sounds like it's made to order," said T'an, grinning. "I'll get into my spacesuit."

"You'll get to work on the radio controls," contradicted Jonner, getting up. "That's something I can't do, and I can get into a spacesuit and haul a length of cable out to the tug. Qoqol can handle the winch."

* * * * *

Deveet, the Atom-Star Company's representative at Mars City, and Kruger of the Space Control Commission were waiting when the Radiant Hope's G-boat dropped down from the Phobos station and came to rest in a wash of jets. They rode out to the G-boat together in a Commission groundcar. Jonner emerged from the G-boat, following the handcuffed Serj.

"He's all yours," Jonner told Kruger, gesturing at Serj. "You have my radio reports on the cable-cutting, and I'll make my log available to you."

Kruger put his prisoner in the front seat of the groundcar beside him, and Jonner climbed in the back seat with Deveet.

"I brought the crates of dies for the groundcar factory down this time," Jonner told Deveet. "We'll bring down all the loose cargo before shooting the television cable down. While they're unloading the G-boat, I wish you'd get the tanks refilled with hydrazine and nitric acid. I've got enough to get back up, but not enough for a round trip."

"What do you plan to do?" asked Deveet. He was a dark-skinned, long-faced man with a sardonic twist to his mouth.

"I've got to sign on a new ship's doctor to replace Serj. When the Marsward comes in, Marscorp will have a dozen G-boats working round the clock to unload and reload her. With only one G-boat, we've got to make every hour count. We still have reaction mass to pick up on Phobos."

"Right," agreed Deveet. "You can take the return cargo up in one load, though. It's just twenty tons of Martian relics for the Solar Museum. Mars-to-Earth cargos run light."

At the administration building, Jonner took his leave of Deveet and went up to the Space Control Commission's personnel office on the second floor. He was in luck. On the board as applying for a Mars-Earth run as ship's doctor-psychologist was one name: Lana Elden.

He looked up the name in the Mars City directory and dialed into the city from a nearby telephone booth. A woman's voice answered.

"Is Lana Elden there?" asked Jonner.

"I'm Lana Elden," she said.

Jonner swore under his breath. A woman! But if she weren't qualified, her name would not have been on the Commission board.

The verbal contract was made quickly, and Jonner cut the Commission monitor into the line to make it binding. That was done often when rival ships, even of the same line, were bidding for the services of crewmen.

"Blastoff time is 2100 tonight," he said, ending the interview. "Be here."

Jonner left the personnel office and walked down the hall. At the elevator, Deveet and Kruger hurried out, almost colliding with him.

"Jonner, we've run into trouble!" exclaimed Deveet. "Space Fuels won't sell us any hydrazine and nitric acid to refill the tanks. They say they have a contract with Marscorp that takes all their supply."

"Contract, hell!" snorted Jonner. "Marscorp owns Space Fuels. What can be done about it, Kruger?"

Kruger shook his head.

"I'm all for you, but Space Control has no jurisdiction," he said. "If a private firm wants to restrict its sales to a franchised line, there's nothing we can do about it. If you had a franchise, we could force them to allot fuel on the basis of cargo handled, since Space Fuels has a monopoly here. But you don't have a franchise yet."

Jonner scratched his grey head thoughtfully.

It was a serious situation. The atom-powered Radiant Hope could no more make a planetary landing than the chemically-powered ships. Its power gave a low, sustained thrust that permitted it to accelerate constantly over long
periods of time. To beat the powerful pull of planetary surface gravity, the terrific burst of quick energy from the streamlined G-boats, the planetary landing craft, was needed.

"We can still handle it," Jonner said at last. "With only twenty tons return cargo, we can take it up this trip. Add some large parachutes to that, Deveet. We'll shoot the end of the cable down by signal rocket, out in the lowlands, and stop the winch when we've made contact, long enough to attach the rest of the cargo to the cable. Pull it down with the cable and, with Mars' low gravity, the parachutes will keep it from being damaged."

But when Jonner got back to the landing field to check on unloading operations, his plan was smashed. As he approached the G-boat, a mechanic wearing an ill-concealed smirk came up to him.

"Captain, looks like you sprung a leak in your fuel line," he said. "All your hydrazine's leaked out in the sand."

Jonner swung from the waist and knocked the man flat. Then he turned on his heel and went back to the administration building to pay the 10-credit fine he would be assessed for assaulting a spaceport employee.

* * * * *

The Space Control Commission's hearing room in Mars City was almost empty. The examiner sat on the bench, resting his chin on his hand as he listened to testimony. In the plaintiff's section sat Jonner, flanked by Deveet and Lana Elden. In the defense box were the Mars Corporation attorney and Captain Russo Baat of the Marsward XVIII. Kruger, seated near the rear of the room, was the only spectator.

The Mars Corporation attorney had succeeded in delaying the final hearing more than a 42-day Martian month by legal maneuvers. Meanwhile, the Marsward XVIII had blasted down to Phobos, and G-boats had been shuttling back and forth unloading the vessel and reloading it for the return trip to Earth.

When testimony had been completed, the examiner shuffled through his papers. He put on his spectacles and peered over them at the litigants.

"It is the ruling of this court," he said formally, "that the plaintiffs have not presented sufficient evidence to prove tampering with the fuel line of the G-boat of the spaceship Radiant Hope. There is no evidence that it was cut or burned, but only that it was broken. The court must remind the plaintiffs that this could have been done accidentally, through inept handling of cargo.

"Since the plaintiffs have not been able to prove their contention, this court of complaint has no alternative than to dismiss the case."

The examiner arose and left the hearing room. Baat waddled across the aisle, puffing.

"Too bad, Jonner," he said. "I don't like the stuff Marscorp's pulling, and I think you know I don't have anything to do with it.

"I want to win, but I want to win fair and square. If there's anything I can do to help...."

"Haven't got a spare G-boat in your pocket, have you?" retorted Jonner, with a rueful smile.

Baat pulled at his jowls.

"The Marsward isn't carrying G-boats," he said regretfully. "They all belong to the port, and Marscorp's got them so tied up you'll never get a sniff of one. But if you want to get back to your ship, Jonner, I can take you up to Phobos with me, as my guest."

Jonner shook his head.

"I figure on taking the Radiant Hope back to Earth," he said. "But I'm not blasting off without cargo until it's too late for me to beat you on the run."

"You sure? This'll be my last ferry trip. The Marsward blasts off for Earth at 0300 tomorrow."

"No, thanks, Russo. But I will appreciate your taking my ship's doctor, Dr. Elden, up to Phobos."

"Done!" agreed Baat. "Let's go, Dr. Elden. The G-boat leaves Marsport in two hours."

Jonner watched Baat puff away, with the slender, white-clad brunette at his side. Baat personally would see Lana Elden safely aboard the Radiant Hope, even if it delayed his own blastoff.

Morosely, he left the hearing room with Deveet.

"What I can't understand," said the latter, "is why all this dirty work, why didn't Marscorp just use one of their atom-drive ships for the competition run?"

"Because whatever ship is used on a competition run has to be kept in service on the franchised run," answered Jonner. "Marscorp has millions tied up in hydrazine interests, and they're more interested in keeping an atomic ship off this run than they are in a monopoly franchise. But they tie in together: if Marscorp loses the monopoly franchise and Atom-Star puts in atom-drive ships, Marscorp will have to switch to atom-drive to meet the competition."

"If we had a franchise, we could force Space Fuels to sell us hydrazine," said Deveet unhappily.

"Well, we don't. And, at this rate, we'll never get one."

* * * * *

Jonner and Deveet were fishing at the Mars City Recreation Center. It had been several weeks since the Marsward XVIII blasted off to Earth with a full cargo. And still the atomic ship Radiant Hope rested on Phobos with
most of her Marsbound cargo still aboard; and still her crew languished at the Phobos space station; and still Jonner moved back and forth between Mars City and Marsport daily, racking his brain for a solution that would not come.

"How in space do you get twenty tons of cargo up to an orbit 5,800 miles out, without any rocket fuel?" he demanded of Deveet more than once. He received no satisfactory answer.

The Recreation Center was a two-acre park that lay beneath the plastic dome of Mars City. Above them they could see swift-moving Phobos and distant Deimos among the other stars that powdered the night. In the park around them, colonists rode the amusement machines, canoed along the canal that twisted through the park or sipped refreshment at scattered tables. A dozen or more sat, like Jonner and Deveet, around the edge of the tiny lake, fishing.

Deveet's line tightened. He pulled in a streamlined, flapping object from which the light glistened wetly. "Good catch," complimented Jonner. "That's worth a full credit."

Deveet unhooked his catch and laid it on the bank beside him. It was a metal fish: live fish were unknown on Mars. They paid for the privilege of fishing for a certain time and any fish caught were "sold" back to the management at a fixed price, depending on size, to be put back into the lake.

"You're pretty good at it," said Jonner. "That's your third tonight."

"It's all in the speed at which you reel in your line," explained Deveet. "The fish move at pre-set speeds. They're made to turn and catch a hook that moves across their path at a slightly slower speed than they're swimming. The management changes the speeds once a week to keep the fishermen from getting too expert."

"You can't beat the management," chuckled Jonner. "But if it's a matter of matching orbital speeds to make contact, I ought to do pretty well when I get the hang of it."

He cocked an eye up toward the transparent dome. Phobos had moved across the sky into Capricorn since he last saw her. His memory automatically ticked off the satellite's orbital speed: 1.32 miles a second; speed in relation to planetary motion...

Why go over that again? One had to have fuel first. Meanwhile, the Radiant Hope lay idle on Phobos and its crew whirled away the hours at the space station inside the moon, their feet spinning faster than their heads ... no, that wasn't true on Phobos, because it didn't have a spin to impart artificial gravity, like the space stations around Earth.

He sat up suddenly. Deveet looked at him in surprise. Jonner's lips moved silently for a moment, then he got to his feet.

"Where can we use a radiophone?" he asked.

"One in my office," said Deveet, standing up.

"Let's go. Quick, before Phobos sets."

They turned in their rods, Deveet collecting the credits for his fish, and left the Recreation Center.

When they reached the Atom-Star Company's Martian office Jonner plugged in the radiophone and called the Phobos space station. He got T'an.

"All of you get aboard," Jonner ordered. "Then have Qoqol call me."

He signed off and turned to Deveet. "Can we charter a plane to haul our Earthbound cargo out of Marsport?"

"A plane? I suppose so. Where do you want to haul it?"

"Charax is as good as any other place. But I need a fast plane."

"I think we can get it. Marscorp still controls all the airlines, but the Mars government keeps a pretty strict finger on their planetbound operations. They can't refuse a cargo haul without good reason."

"Just to play safe, have some friend of yours whom they don't know, charter the plane in his name. They won't know it's us till we start loading cargo."

"Right," said Deveet, picking up the telephone. "I know just the man."

** * * *

Towmotors scuttled across the landing area at Marsport, shifting the cargo that had been destined for the Radiant Hope from the helpless G-boat to a jet cargo-plane. Nearby, watching the operation, were Jonner and Deveet, with the Marsport agent of Mars Air Transport Company.

"We didn't know Atom-Star was the one chartering the plane until you ordered the G-boat cargo loaded on it," confessed the Mars-Air agent.

"I see you and Mr. Deveet are signed up to accompany the cargo. You'll have to rent suits for the trip. We have to play it safe, and there's always the possibility of a forced landing."

"There are a couple of spacesuits aboard the G-boat that we want to take along," said Jonner casually. "We'll just wear those instead."

"Okay." The agent spread his hands and shrugged. "Everybody at Marsport knows about you bucking Marscorp, Captain. What you expect to gain by transferring your cargo to Charax is beyond me, but it's your business."
An hour later, the chartered airplane took off with a thunder of jets. Aboard was the 20-ton cargo the Radiant Hope was supposed to carry to Earth, plus some large parachutes. The Mars-Air pilot wore a light suit with plastic helmet designed for survival in the thin, cold Martian air. Jonner and Deveet wore the bulkier spacesuits.

Five minutes out of Marsport, Jonner thrust the muzzle of a heat-gun in the pilot's back.

"Set it on automatic, strap on your parachute and bail out," he ordered. "We're taking over."

The pilot had no choice. He went through the plane's airlock and jumped, helped by a hearty boost from Jonner. His parachute blossomed out as he drifted down toward the green Syrtis Major Lowland. Jonner didn't worry about him. He knew the pilot's helmet radio would reach Marsport and a helicopter would rescue him shortly.

"I don't know what you're trying to do, Jonner," said Deveet apprehensively over his spacehelmet radio. "But whatever it is, you'd better do it fast. They'll have every plane on Mars looking for us in half an hour."

"Let 'em look, and keep quiet a while," retorted Jonner. "I've got some figuring to do."

He put the plane on automatic, took off the spacesuit handhooks and scribbled figures on a scrap of paper. He tuned in the plane's radio and called Qoqol on Phobos. They talked to each other briefly in Martian.

The darker green line of a canal crossed the green lowland below them.

"Good, there's Drosinas," muttered Jonner. "Let's see, time 1424 hours, speed 660 miles an hour...."

Jonner boosted the jets a bit and watched the terrain.

"By Saturn, I almost overran it!" he exclaimed. "Deveet, smash out those ports."

"Break out the ports?" repeated Deveet. "That'll depressurize the cabin!"

"That's right. So you'd better be sure your spacesuit's secure."

Obviously puzzled, Deveet strode up and down the cabin, knocking out its six windows with the handhooks of his spacesuit. Jonner maneuvered the plane gently, and set it on automatic. He got out of the pilot's seat and strode to the right front port.

Reaching through the broken window, he pulled in a section of cable that was trailing alongside. While the baffled Deveet watched, he reeled it in until he brought up the end of it, to which was attached a fish-shaped finned metal missile.

"Pick it up and pass it out the right rear port," he commanded. "We'll have to pass it to each other from port to port. The slipstream won't let us swing it forward and through."

In a few moments, the two of them had worked the missile and the cable end to the right front port and in through it. Originating above the plane, it now made a loop through the four open ports. Jonner untied the missile and tied the end to the portion which came into the cabin, making a bowline knot of the loop. Deveet picked up the missile from the floor, where Jonner had thrown it.

"Looks like a spent rocket shell," he commented.

"It's a signal rocket," said Jonner. "The flare trigger was disconnected."

He picked up the microphone and called the Radiant Hope on Phobos.

"We've hooked our fish, Qoqol," he told the Martian, and laid the mike aside.

"What does that mean?" asked Deveet.

"Means we'd better strap in," said Jonner, suiting the action to the words. "You're in for a short trip to Phobos, Deveet."

Jonner pulled back slowly on the elevator control, and the plane began a shallow climb. At 700 miles an hour, it began to attain a height at which its broad wings--broader than those of any terrestrial plane--would not support it.

"I'm trying to decide," said Deveet with forced calm, "whether you've flipped your helmet."

"Nope," answered Jonner. "Trolling for those fish in Mars City gave me the idea. The rest was no more than an astrogation problem, like any rendezvous with a ship in a fixed orbit, which Qoqol could figure. Remember that 6,000-mile television cable the ship's hauling? Qoqol just shot the end of it down to Mars' surface by signal rocket, we hooked on and now he'll haul us up to Phobos. He's got the ship's engine hooked onto the cable winch."

The jets coughed and stopped. The plane was out of fuel. It was on momentum--to be drawn by the cable, or to snap it and fall.

"Impossible!" cried Deveet in alarm. "Phobos' orbital speed is more than a mile a second! No cable can take the sudden difference in that and the speed we're traveling. When the slack is gone, it'll break!"

"The slack's gone already. You're thinking of the speed of Phobos, at Phobos. At this end of the cable, we're like the head of a man in the control section of a space station, which is traveling slower than his feet because its orbit is smaller--but it revolves around the center in the same time."

"Look," Jonner added, "I'll put it in round numbers. Figure your cable as part of a radius of Phobos' orbit. 
Phobos travels at 1.32, but the other end of the radius travels at zero because it's at the center. The cable end, at the Martian surface, travels at a speed in between—roughly 1,200 miles an hour—but it keeps up with Phobos' revolution. Since the surface of Mars itself rotates at 500 miles an hour, all I had to do was boost the plane up to 700 to match the speed of the cable end.

"That cable will haul a hell of a lot more than twenty tons, and that's all that's on it right now. By winching us up slowly, there'll never be too great a strain on it."

Deveet looked apprehensively out of the port. The plane was hanging sidewise now, and the distant Martian surface was straight out the left-hand ports. The cable was holding.

"We can make the trip to Earth 83 days faster than the Marsward," said Jonner, "and they have only about 20 days' start. It won't take us but a few days to make Phobos and get this cable and the rest of the cargo shot back to Mars. Atom-Star will get its franchise, and you'll see all spaceships switching to the atomic drive within the next decade."

"How about this plane?" asked Deveet. "We stole it, you know."

"You can hire a G-boat to take it back to Marsport," said Jonner with a chuckle. "Pay Mars-Air for the time and the broken ports, and settle out of court with that pilot we dropped. I don't think they'll send you to jail, Deveet."

He was silent for a few minutes.

"By the way, Deveet," said Jonner then, "radio Atom-Star to buy some flonite cable of their own and ship it to Phobos. Damned if I don't think this is cheaper than G-boats!"
EVIL OUT OF ONZAR
By Mark Ganes

The orphan system of Onzar was fuming under its leader's driving, paranoid megalomania. For there was a prize. A vast, grand prize within a parsec of this ambitious domain--the major warp-lines of space crossing the Galaxy between the Allied Worlds and the Darzent Empire. Skyward, hungry legions!

Roger Thane had, of course, heard of these meetings. The stories of his acquaintances in Liaison had been graphic enough but they didn't begin to do the scene justice. It was, well, jarring.

Through the one-way glass panel built into one side of the vast meeting hall of the space station, Thane looked directly across at the delegation from Onzar, though "delegation" was hardly the word. All top gold from the Onzar group was there, and it was easy to tell their rank--fleet marshals, the technical advisors, the interpreters--by the amount of gold that encrusted their helmets, coruscated from their shoulder boards, and crept and crawled in heavy filigree around their uniforms. In that assembly it was easy to pick out Candar. Shorter than the average Onzarian, with shaven head, his uniform was quite plain except for small, double-headed platinum shagells on the collar.

And Candar was doing all the talking. When he had started one hour and fifteen minutes ago his voice had been harsh and low. Now it had increased in pitch and volume and he was striding back and forth, showing his scorn for the Allied Systems in every gesture. Thane glanced at the "absolute" dial of his watch and wondered how long it would keep up.

"... we have come to deal with you in good faith and again you seek to exploit us. You would, if you could, take all we produce and give nothing in return. This you shall not do. Onzar is young, but already its power encompasses five suns. Each day we grow stronger. We do not need your shoddy goods in exchange for our treasure."

As Candar's voice became louder and more shrill Thane noticed that a technician to his left kept adjusting the recorder dials. In an hour or so the speech would be broadcast through Onzar, three and a half light years from this meeting place in space. Candar was choosing words to inflame the already fanatical nationalism of his expanding system. "You would take our discoveries, the fruits of our genius and industry. You would even take our young men into slavery. But this Candar will prevent. We are a warrior race, and what we need, we take. Our day approaches."

The last three words were his trademark, his invariable sign-off. So that was that. Candar strode from the room followed by the marshals, the advisors, the interpreters. Thane looked over to Garth who had slumped a bit in his conference chair on the Allied Systems side of the room, and was lighting a cigar. Thane had never particularly liked Garth, but, now, he felt a touch of sympathy with him. Garth took two long puffs on his cigar and then slowly shrugged his shoulders as if to put a final period to the scene.

Back in the Allied Systems naval cruiser, Garth was getting out of his reserve marshal's uniform. He glanced across at Thane, strapping his couch belts at the other side of the compartment. "I wanted you to see Candar in operation. Figured you might as well as long as this show was scheduled anyway. Could be that it will be of use to you in your new assignment."

The navigator's voice came over the intercom, "Prepare for finite acceleration, twenty seconds absolute."

* * * * *

Garth zipped up his civilian coveralls and dropped to the couch, slipping the stub of his cigar into the converter tube. "This conference was about like the rest. It makes the sixth, now, that I've sat through with Candar. You remember he was full of cooperation right at the start while we were renewing the gold-trade agreement. After that was settled there was nothing more in it for him except the chance to make another speech."

Thane looked over at Garth. "I noticed that. But why? There was certainly plenty of gold splashed over everyone in the Onzar delegation, but what is it that makes the stuff so important to them?"

Garth looked over in surprise. "You don't know? Well, of course you wouldn't. You've been working on specialized stuff on the other side of the Galaxy. I'll give you some of the background on the way back to Liaison. The sleep-trainer will fill in there."

Garth stopped. Everything stopped as the acceleration began. Both of them were over-braced for the acceleration was light and even. It was only 5000 KM to the nearest warp-line.

As acceleration slacked off for the five-minute coast into the warp, Garth lit another cigar and began. "Onzar was one of those relatively distant systems which were colonized back in the days when all they had was the finite drive. Of course, it took them a generation or so to get out there, at just under the speed of light. And when they got there, the best guess is that their ship was too damaged for further flight. Otherwise, considering the planet, they
wouldn't have stayed."

Thane flipped through a systems manual to the geographical data for Onzar IV. He readily agreed that they wouldn't have stayed if it had been possible for them to get away. Onzar IV was cold, bitterly cold. Hurricane winds were common. The mountains went up to forty and fifty kilometers, and the land between them was largely barren desert.

"They couldn't get back into space," Garth continued, "so they stayed in splendid isolation for about 1500 years. Not another ship touched the system till the warp-lines were discovered."

Thane looked up. "I suppose they went through the usual reversion of the orphan systems?"

Garth grunted. "A lot worse than usual. Of course, our version of their history is largely guesswork because the Onzarians have never allowed any research. But it's clear that the immigration crew, or their first-generation descendants, put on a very effective little war between themselves. By the time they were finished Onzar IV was back in the age of ox-carts, without the ox."

The intercom sounded again. "Five seconds to warp-line." There was a pause, then the familiar shummer and they were on the warp-line drive. As usual, the shummer had put out Garth's cigar. He re-lit it and went on. "When we began using warp-line travel we hit Onzar in the first fifty years of exploration. Practically had to. It's only a parsec from the confluence of nine lines running between our part of the Galaxy and the Darzent Empire. Right on the main road, right in the middle of the next war. He stared in silence at Thane for a moment. "That's one reason I've called you in on this."

For most of the rest of the trip to Liaison, Garth continued to explain the strange orphan system of Onzar. In the religion, as Garth described it, the whole priesthood was female, and gold had magical value. All the men wore gold, the amount strictly in line with their rank. They despised the women but were in superstitious dread of them because only the church could sanctify and give power to their gold symbols of rank. At first, the men had lived in warring tribes, the women in religious groups. They came together each spring and fall for the ceremonies of gold consecration.

Still, they did make considerable technical progress, partially because of their interest in mining. By the time the first warp-line ship reached them, the Onzarians had the internal combustion engine, nation-states, mass production, planet-wide wars.

"Of course," Garth went on, "in the early days of warp-line exploration we weren't as careful as we are now. The Onzarians picked up enough to put on a real atomic war within fifty years. After that they expanded through their own system, and even took over nearby suns. They certainly had the motive for conquest, too. Gold was running out on their own planet, and they'd go to any lengths to get it."

Thane glanced at his watch and got back onto his couch. "About time for deceleration," he said. Garth also began fastening his straps. Thane glanced over, with curiosity. "Sounds like the usual story, with some interesting variations. Where do I come in?"

"The thing that makes Onzar uniquely important," Garth said, "is its position. Space fleets from Darzent or from the A.S. will have to pass within a parsec of Onzar, because of the confluence of warp-lines in that part of the system. Whoever controls Onzar can win the war for the Galaxy when it comes."

Garth paused as they went through the shummer and the beginnings of deceleration, and then went on. "We were doing fairly well till Candar's revolt and seizure of power. He is leaning toward Darzent. Apparently he thinks he can keep his own independence even if Darzent wins the decision. He's going along with us just enough to assure his supply of gold. But you noticed his own lack of gold ornamentation. His eventual aim is undoubtedly to dominate and destroy the religion because it's about the only independent force left on Onzar, and Candar is not going to tolerate any independent forces."

Garth looked steadily at Thane. "The rest of the details, the language, and your own mission will be made clear to you in the sleep trainer. And it is no exaggeration to say that you will be responsible for the future of the Galaxy."

Liaison Headquarters had started out several centuries before as a small organization within the Department of the Outside, directly under the control of the newly-formed Allied Systems Council. It had begun in a room, and had later moved to its own building. Now it occupied a planet.

The four planets in the system all appeared to be barren, lifeless rocks.Appearances were correct for I, III, and IV. II, however, was not what it seemed. Like the others, the surface was rocky, barren, utterly lifeless, without atmosphere. But a few kilometers down, a red-haired boy had just won a game of bok at school recess. A research worker had just finished a report on an improved interrogatory drug. An administrative assistant had just planned a palace revolution on a system 200 light years away. And Roger Thane, Liaison Agent, was just entering Medico-Synthesis, some eighteen kilometers under the surface.

The young medic looked up as Thane stepped off the mobiltrack and entered the room. "You're Thane," he
said, with curiosity in his voice. "The instructions and the sleep-record just came through the Pneum. I've heard about you people from Proxima. Just how does it work, anyway?"

Thane walked over to the sleep-table and grinned a little wearily. "How are you able to see?" he asked. "I don't know that I could tell a blind man satisfactorily. How do the people of the Noxus system telepath? I don't know, and they've tried to tell me. All I know is that mutations occurred sometime while Proxima Centauri was an orphan system, which enable many of us to make small changes in our appearance. Hair color, skin pigmentation, fingerprints. Usually takes about two days. Liaison Research learned how to speed it up with equipment but they never have learned just what they're working with." He smiled apologetically. "I'm afraid that doesn't help you a bit but there's nothing much more I can say that will give you a clearer picture. I've tried before."

Thane was then in his own normal: black hair and eyes, somewhat over two meters in height, with the heavily tanned Proxima skin. Before sliding on the table he took a sheet from the medic and glanced over his new specifications: yellow eyes, golden hair, golden skin. Slight slant to eyes. Three centimeters height reduction. All routine changes, and a matter of a few minutes, with the aid of the Liaison equipment.

The medic was busy making connections, giving injections and setting dials. Thane looked up at the brightly lighted ceiling. With no perceptible lapse he was still staring at it when the medic began taking off the connections. But in the zero subjective time, the twelve minutes of elapsed time, Thane had changed his appearance completely. And what he had learned puzzled him at first and then angered him.

"Roger Thane," the sleep-record began, "your assignment is the protection of Dr. Manning Reine...."

Reine, he learned, was one of the scientists who had been working in obscure laboratories on the Forsberg Project. Forsberg's mathematics had shown the theoretical possibility of a discreet jump, with no time lapse, from one of the curving lines of warp to the next, instead of the present method of travel at "friction speed" along the erratically curving lines.

Garth's voice cut in on the speech record. "Now that we have the drive, what are we going to do with it? Politically, the Allied Systems cannot initiate the attack. Yet if we merely wait, Darzent will eventually learn the details of the drive. As it is, they outnumber us, two to one. They have the advantage in almost every respect. Their only deterrent has been the fear that we do have the second-stage drive.

"There have already been leaks--enough so that if Manning Reine falls into Darzent hands, they would have the drive in operation within a few days. Then immediate attack, and defeat. Your job is to protect Reine, or to kill him if there is danger of his loss to Darzent."

Manning Reine, a native of Onzar, had been educated at the Systems University at Beirut, Earth. He'd returned to Onzar but had fled at the time of the Candar revolution. On Earth, he'd married and gone on with his research work. Now, after twenty-five years, he was the key figure in the development of the drive. Undoubtedly his knowledge was enough to allow Darzent to develop the drive if he should fall into their hands. And he was not susceptible to the protective, anti-interrogatory drugs. Reine himself had developed the vitally important gold catalyst principle.

Reine's address was just a pair of top-secret geographical coordinates, a thousand kilometers from the nearest feeder jet-line. Thane looked down at the endless Norwegian forest, a thousand meters below his rented anti-grav scout. He felt depressed. That was always a reaction to be expected, of course, after an accelerated identity change. But then too, there'd been the scene with Garth after he'd left Medico-Synthesis.

Thane had strode past Garth's secretary and into the inner office without a word. Garth was behind his desk, his back to the door, studying a galactic wall map. He turned slowly.

"A bodyguard!" Thane exclaimed. "Is that your idea of the most responsible job in the Galaxy? You pulled me off the Elron business just when I was set to engineer the beginnings of a representative government there. The whole project will be set back by years. And it was touch-and-go as it was. And for what?"

Garth looked at him calmly for a moment, as he bit off the end of a fresh cigar. "Thane," he finally said, with deliberation, "the executive council of the Department of the Outside just doesn't like your methods. You've put through some really brilliant maneuvers but you've done it alone, taking chances. I've tried to go along with you but the last report from Elron caused a real blow-up at the council. One of the council members suggested your assignment to this bodyguard job, as you call it, and they all agreed. I had to go along."

"Just why, then, is all this Onzar background necessary? Did you think it would fool me?"

"I said I had to go along," Garth answered impatiently, "but that's not all. I also wanted to go along with the idea. This is much more important than it appears on the surface. We have reason to believe that Reine is still connected with Onzar. We don't have much to go on, but one of your jobs will be to get the details."

The coordinates on the lat-don dial had almost lined up, though the forest was still completely unbroken below. A few hundred meters to the right and he had it. Thane let the anti-grav hover for a moment, and then dropped
silently downward. Branches of spruce brushed against the plastic cabin as the anti-grav settled into the forest. It gently settled on a thin layer of powder snow. There was nothing but the silence of the forest, broken only by the thin sound of the wind in the branches above.

He stepped out, breathing in the cold, crisp air. He started off through the forest using the unfamiliar Terran compass. One hundred twenty meters, azimuth 273 (difficult to maintain through the trees) and he would come, according to his directions, to a tree a little different from the rest. He continued, with the brittle snow tinkling faintly under his feet.

Then a new sound. Once ... again ... then a repeated volley. Stoltz guns. From the tone, hand size, tuned down below lethal potential, but enough to stun and mutilate.

He was absolutely still for a moment. Then he began running towards the sound, trying to minimize the noise of crunching snow under his feet.

He swerved to pass a clump of trees and brush. As he did three things happened. A small thrush started into the air off a branch, fluttered a moment, then fell to the snow. A white-clad figure appeared ahead, just at the next bend. And.... Thane wondered just what he was doing here ... why wasn't he on Proxima? He remembered school there at fun in elementary atomics....

Then his training took over, forcing his temporarily twisted brain to perform rationally. As he dropped to the brittle snow and aimed his own Stoltz, he automatically catalogued his confusion as the result of an off-shot, a near miss. He hit the snow. The white figure was just off his sights, but close enough. He pressed the impeller. That one didn't miss, and it had been set on "lethal." He crept forward across the ground. He was sure that his immediate opponent was through, but there were others. The slithering Stoltz noises ahead increased in volume.

He reached the white-cloaked figure. Onzarian. The eyes and mouth had the idiot expression peculiar to a Stoltz corpse. Thane considered. He was at a disadvantage against the snow in his blue civilian coveralls. He quickly stripped the white cloak off the corpse and put it on as he continued at a run.

He slowed as he approached a clearing. Not much of a clearing, not large enough to be spotted from the air. Two figures in the Patrol uniform were stretched out, motionless, a few meters from the tree at the center. Two men in white cloaks were carrying a third figure between them, just entering the pine forest at the further edge. Thane instantly recognized the unconscious figure as Reine. At once he started towards them, shifting the Stoltz to the lightest stun position. That cut the range way down, even for this close-in weapon, but it would be dangerous for Reine if he used more. Reine apparently had had one dose already. On the run, Thane aimed at one figure he had not seen before. Apparently it was good, for Thane was able to keep going. Fifteen meters distant from the three figures, Thane stopped. They were just visible through the trees. He raised his Stoltz and ... thought of Proxima....

... he was fifteen and the dance was wonderful. She was dressed in the new shell-white toga that was fashionable just then. It certainly set off her jet-black hair, shining on the terrace, in the light of Proxima's two moons....

But it wasn't black, it was blonde. And she wasn't leaning against his arm on the terrace, she was standing in front of him, and he was lying on the brittle snow. There was a Stoltz in her bare right hand.

She stared at him, steadily and coldly. "It is turned all the way up now. I hope you are ready to die, Onzarian!"

Thane, as he recovered fully from the Stoltz shock, recognized the tall blonde girl standing before him. Astrid Reine, Manning's daughter and assistant. He raised himself painfully to his elbows. As he did, he saw Astrid's knuckles tighten around the impeller.

"No, Astrid," he said. "I'm here to help you. We may still be able to save your father."

Her hand didn't waver. The expression on her golden face was scornful. "Do not lie so childishly! You came with the Onzarians, the agents of Candar. You are one of them. You came to take my father."

Thane desperately gestured back the way he had come. "My footprints are in the snow. There's an Onzarian I killed. And my anti-grav. I was sent to protect your father."

"Who are you?"

A roaring noise came from the east and a moment later a jet cleared the tree tops, headed south. Thane saw the ship at the edge of his vision, but kept his eyes on Astrid. She turned her head slightly at the sound. Slightly, but enough. Thane's tensed muscles contracted as he sprang to his feet. She pressed the impeller--just as his left foot kicked in a high arc and caught the side of the barrel.

The gun spun off to the edge of the clearing. "Now," he said angrily, "don't you think we've wasted enough time? They have him now, and with that jet they'll have enough start on us to leave the system before we can catch them." As he spoke, the jet reappeared and slipped down low over the trees to the west. "Hurry," he said, "they'll be on us in seconds."

She looked at him, hesitated. Then, "All right. Inside."
She stepped over to the trunk of the tree and spoke softly. A panel opened in the ground at the foot of the tree, over a grav-well. They dropped gently, and the panel closed behind them. As they floated slowly downward they heard a sharp explosion overhead. He smiled wryly at Astrid, dropping beside him.

"Your change of heart," he said, "didn't come any too soon."

Reine's laboratory, like a great deal else in the Allied Systems, had gone underground as galactic war approached. Far beneath the surface, the grav-well ended in a corridor, stretching out a hundred meters. Rooms filled with equipment opened out at either side. As they walked down the corridor, Thane explained his mission and his Onzarian appearance. "Now," he went on, "there's a lot for me to catch up on."

"It's been terrible," Astrid said. "First, there was the attack yesterday. We fought them off, then. Liaison radioed that they were sending more protection. But the jet that landed today flashed the Liaison code to our auto-interrogator. We lowered the screen and they began to attack. We didn't stand a chance, once they were inside."

It was all clear enough, and it was certainly also clear that he was late. There was the faint possibility that Reine could still be rescued before the Onzarians could leave the system.

He turned to Astrid. "If they plan to leave by the regular Onzarian transport, we should be able to catch them at the Aberdeen spaceport. Where's the radio?"

They had reached an open door. Astrid's gesture was hopeless. Thane looked inside. The Onzarians had been there before they left. Twisted, melted circuits were all they had left.

* * * * *

The anti-grav scout got them to the Aberdeen spaceport an hour late. The Onzarian gold transport had left for Kadell IV. A few questions were enough to justify Thane's growing pessimism. Several Onzarians had taken passage. One was heavily drugged, under the care of a physician.

The hours dragged till they were able to get passage on the next Kadell-bound transport the following day. Once spaceborne, Thane felt a lot of his depression lift. There was a good chance they would reach the Kadenar spaceport on Kadell IV before the other ship had left. In the meantime there was Astrid....

By the time they had reached the second warp-line intersection Thane had learned that Astrid had also attended the Systems University at Beirut, three classes behind him. They'd had some of the same professors and a couple of mutual friends. Thane told her of life on Proxima, and she told him how she had lived and worked with her father. Her talk was in the off-hand sort of vocal shorthand that their generation shared. But through the facade, Thane could see that she was immensely brilliant in research, fascinated with her work, and at the same time, immensely lonely. She was animated when she spoke of the work that she and her father had done but there was a different sparkle in her yellow eyes when she talked of the university. Talks with fellow students, a brief love affair, weekend trips to Tel Aviv or New Rome--it was plain that she had badly missed it all in her years in Norway, in the glittering, isolated laboratory far under the snow.

And always there was recurrent alarm for her father. She broke off her talk of the University and gripped his arm. "Roger, we must stop them. If they take my father to Onzar, he'll be killed. And the movement. What will happen to that?"

"The movement?" Roger Thane asked, puzzled.

"Of course," she said, surprised. "Don't you know about it?"

Thane was about to answer, but just then there was the shummer as they re-entered space at the second warp-line intersection. At the same moment the red warning light in their compartment blinked. The navigator's voice, with an undercurrent of alarm, came over the intercom. "Emergency. Emergency! Crew to battle stations. Passengers to lifeboats."

Roger and Astrid dashed out into the port corridor. The corridor widened as they ran forward, and they were suddenly in the port fire control center. An Onzarian officer, the Third from his insignia, was at the fire control panel. Thane looked at the screen over the Third's head. The ship was black and unmarked but if it was a pirate it was by far the biggest Thane had ever seen. The whole black hulk was turning in space, a hundred KM away, lining up its armament. It would only be seconds. Thane looked at the Third. He seemed to be confused, and was fumbling almost blindly with the instruments. He twisted dials almost at random, on the edge of panic. Thane hesitated--then realized what it must be--Stoltz artillery. The unmarked ship had managed to get through with it, during the microseconds of the shummer when the screens were down.

He could feel some of the effect himself. He went through a moment of indecision, but that was all. Then he stepped forward and shoved the Third Officer aside. The officer looked blank, then his face reddened in anger. As Thane tried to bring the armament to bear, the Third was clawing at his back. Thane bent and twisted. The Third went crashing into a bulkhead. Thane didn't even glance at him. There was no time. He turned back to the fire control. As he did, the first disrupter explosion came, not two kilometers ahead. The next one would get them.

Thane twisted the manual computer for there was no time to wait for the automatic to warm up. Two small
and leaned against his counter. "And now, Pyuf, the referee." He pointed to a green line bisecting the enclosure.

"You two gentlemen will now roll the die. He who is high has his choice of either group of weapons.

"I also saved your life and my own," Thane said drily, "but if you want me to take yours back, I'll be glad to oblige. See you at Kadenar." Thane turned on his heel and walked away.

Dueling was forbidden by the Systems Code but on such outposts as Kadenar it was not only allowed but even encouraged.

Therefore, no time was lost in customs. Thane's forged Onzarian passport was stamped "duellist priority" and that was that. Astrid came through as readily as his second. And the Third, with another junior officer, was just behind them.

The four of them sat side by side without a word as their automatic anti-grav taxi took them the ten kilos from the port to Kadenar City, and then beyond. The taxi continued over the City and its three "towns"--the spacetown, the bureaucrat's town, and the miner's town--and finally settled gently down in the foothills beyond. There was a clearing beneath them, with a fenced-in surface. A medic looked up as they got out.

"Differences to settle, gentlemen and my lady? Interne Pyuf at your service. The duelling tax is three sals. Always glad to accept any Systems currency. Then too, there's the cremation deposit required from both parties, the medication fee, and if you gentlemen are interested in insurance, I'm able to supply some very special policies."

After the principals and seconds had signed the register and all fees had been paid, Pyuf leaned back in his chair, lit one of the fashionable 30 centimeter cigarettes, and explained the rules. "In general, no criminal nor civil disability attaches to actions of the principals within this enclosure. Certain fines, however, are imposed if the rules are not followed. To wit: knives only can be used, not to exceed twelve inches. Each contestant may wear a personal anti-grav, limited to fifteen feet ascentability. Anti-gravs must be adjusted to compensate for native gravities." He smiled, in self-deprecation. "That's Pyuf the lawyer at work. Now perhaps you prefer Pyuf the bartender." He reached under his counter and pulled out a bottle, labelled in the local language, and poured out five glasses. "To your continued good health, gentlemen, and I sincerely hope I can return your cremation deposits--though of course, many previous contestants, grateful to be alive, have contributed the amounts to the Interne's Benefit Association."

Thane and the others picked up their glasses. The stuff was yellow, sticky, sweet, and without the slightest doubt, alcoholic. When Thane could manage to speak, he said, "By all means, Pyuf. I'm sure that both my opponent and I will contribute to the internes, dead or alive. Shall we proceed with the main event?"

Before answering, Pyuf poured a small chaser from the same bottle and stood up, a little unsteadily. "By all means. But before we start I might mention that I have been ordained in fourteen systems' religions and will be glad to perform last rites...."

"Enough, enough," said the Third, who was beginning to show signs of nervousness. "Let us get on with it."

Pyuf stepped over to the weapons racks and removed a set of knives and a pair of anti-grav jackets. He laid them on his table and gestured to the Third. "Take a knife and jacket." The Third chose the knife and jacket to the left without more than a cursory glance.

Pyuf reached in his jacket pocket and brought out one of the twelve-faced dies of Kadenar. "Pyuf, the gambler," he said. "You two gentlemen will now roll the die. He who is high has his choice of either group of weapons."

The Third Officer rolled first, and the Kadenar equivalent of nine came up. Thane rolled a five.

"Now," said Pyuf, "it's Pyuf, the couturier. Step forward, gentlemen, to be fitted."

Pyuf fitted the anti-grav jackets to Thane and the Third, and gave each a brief, efficient test. He stepped back and leaned against his counter. "And now, Pyuf, the referee." He pointed to a green line bisecting the enclosure.
"You gentlemen will remain on the other side of the line during the contest. You remain within the fences. You do not ascend higher than fifteen feet. The contest lasts till blood has been drawn three times or until a prior fatality—or do I need add that? At any rate, that's all the rules. The State wishes you well, while it frowns on your activity. To your circles, gentlemen, and await my signal."

Thane judged the area marked off for the "contest" to be about ten meters square. It was smoothly surfaced with one of the hard local metals, and Thane noticed a few bloodstains near the edges. Most of them were the dark brown of dried human blood, but there were other alien colors mixed in here and there.

As he walked across the court Thane looked carefully at his opponent, appraising him. They were both about the same height but the Third had several centimeters more reach. Probably around the equivalent of 23 years, absolute time. Certainly at the peak of physical condition. Thane decided on his course. He would try first for his opponent's anti-grav. Probably the other would try to cover his throat and belly, and Thane might be able to get to the anti-grav by surprise. Then, draw the blood that was in the rules, and get the thing over. Not much of a plan, but at least a plan.

There was an inset ring of some cupra-alloy at each end of the duelling court, about a meter in diameter. Thane reached his end, watched his opponent, and waited for Pyuf's signal. Pyuf slowly poured another drink. As he raised it with his right hand, his left arm went up over his head. He swallowed the drink, and the left arm came down.

The Third Officer came on in all-out attack. His anti-grav assisted leap was long and shallow, aimed at Thane's throat. At the same moment Thane bent his knees slightly and dropped. Just before he hit the surface he pushed up and outward with all his strength and twisted his body sharply. With the assistance of the anti-grav he was floating now directly above and behind his opponent. He cut off the anti-grav completely and dropped, with all the planet's gravity. As he did, the Third twisted and raised his knife. He lacked a fraction of a second to complete the turn and get into lethal position. Thane hit him on the shoulder and instantly turned his anti-grav to the "full" position, grabbed his opponent's shoulders, and pushed against the court surface with both heels.

They both went up and over, almost to the fifteen meter limit. As they did, Thane worked his knife into the anti-grav pack on his opponent's back. Three connections, at the top, left, and bottom. His knife cut in and out rapidly, three times. Then he suddenly pushed away, slipped his own anti-grav to zero, and dropped to the surface.

The Third, suddenly without the assistance of his anti-grav, crashed into the fence and dropped leadenly to the metallised surface. Thane crouched a moment watching him. Thane had a cut above one eye, and the blood was beginning to run. He stepped forward....

... the knife in his hand ... what was it there for? He should be on his way to the rotor meet with the rest of the boys ... he was going to win this year ... he was going to win....

III

The first feeling Thane had when he came out of the Stoltz shock was lightness. He raised his right arm as he came back to consciousness, and he noticed that the effort required was less than he had expected. He opened his eyes, and they gradually came back into focus. He was lying on a cot in a dimly lit room. The light, he saw, came from a small window across the room. With an unfamiliarly light tread, Thane stepped over to the window. The pane was double, transparent metal. It took only one glance at the bleak, wintry landscape outside to explain the feeling of lightness. It could only be the landscape of Onzar II, whose gravity was about 80% that of Kadell IV.

Someone obviously had reason to cart him, unconscious, across a few light years. Apparently, the duel had not been what it seemed. But how? And why? Quite possibly the Third Officer was an agent of Onzarian counter-espionage. If so, what had happened to Astrid? How had Pyuf and the others been taken care of? On the other hand, it was quite possible that Astrid was behind it. He remembered how she seemed to have been talking to the Third just before the challenge. But for what motive? Thane smiled to himself. The speculation was interesting, but a little barren till more data turned up.

It was not long in coming. Thane had begun to explore the room carefully when a door opened. It was Pyuf, armed. "You'll come with me, please." No longer the half drunk duelling attendant, Pyuf was now quite sober and quite serious.

Thane went. There were questions to be answered.

He had somehow expected a long corridor with many doors. Instead, he walked directly into a brightly lighted room, filled with a great deal of equipment. He recognized the latest model lie-detector, a rather outdated narco-synthesizer, a Class B Psychocomputer. Much of the rest was unfamiliar.

There were two Onzarians in the room. Both, in contrast to Pyuf, who was dark and shorter than the average, had typical Onzar features—yellow eyes with a slight slant, and golden skin. Pyuf gestured towards Thane. "Give him the whole routine. We want to know everything you can get. Then let us know."

Thane, of course, had been prepared for this sort of thing. He'd spent time in Medico-Synthesis after every major job to immunize him against interrogation. He'd had three separate, integrated pasts built up, all quite
fictional, which could be used during interrogation. He was protected, at a certain level, against physical torture, and
he did have a certain protection against most of the drugs.

But the older medic simply asked him to sit down. He did, and his assistant twisted a few dials. Indicators gave
readings, quite a few hundred readings. A metal recorder plate dropped out. The assistant dropped this into the
computer which began busily to eject tape. The older man read the tape as it ticked out. The computer stopped and
he crumpled up the tape and tossed it into a corner. "Injection A17," he said.

Vaguely he heard his name. He sat up, blinked his eyes open and looked around. He was in quite a different
room. There were curtains at the windows, a desk, a rug, even a fire. There was a figure in front of him speaking to
him. "Roger Thane, we know you now. There is much that we do not know, that has been hidden from even our
methods. But we know enough."

Thane was now fully alert. The voice had been soothing, but the shock on seeing the face, when his eyes had
come back into focus, was enough to change all his ideas. It was Manning Reine.

Reine was sitting close to him, one elbow casually thrown across the desk. He smiled, and asked if Thane
would like coffee or a drink.

"I've had both," Thane said, "and they're not what I need now. Right now all I want is what goes on. My job,
which I didn't particularly want, was to nursemaid you. Frankly, it's turned out to be quite a job. After three or four
very thorough stoltzings, one space battle, a challenge, and a duel, you have me kidnapped. All right. I've got a
reasonably open mind. I'll listen. Now just what in the hell is going on?"

Manning Reine said calmly, "Undoubtedly you have reason for anger, Thane. It is true that we have used you.
We have had to. But you should know that there was nothing faked about my abduction. Those who took me were
Onzarians, agents of Candar, and they were deadly serious. It was only with the greatest of good fortune that I was
able to escape. Only the presence of Pyuf at Aberdeen Spaceport made it possible.

"And another point for your consideration. We did not know your position. Your appearance is Onzarian. We
could not be sure that you were what you claimed, an agent of Liaison. And even if we could have been sure, there
were considerations that required us to proceed with the greatest caution. Now, I hope you will accept my apologies
and listen. There is much that you can do, important for us and for the whole Galaxy."

Thane controlled his anger and nodded assent. At the moment it was his job to listen if he was going to be
useful from here on in.

"You already have some knowledge of the second-stage drive," Reine began. "You already know that it frees
man for flight through the Galaxy at an average speed ten times greater than that now possible with the present
warp-line drive. You are aware of the warp-line type of movement. We cannot leave the warps without reverting to
finite drive. As you know, the warps are electro-gravitic lines of force in space, along which interstellar travel has
proved possible with certain devices...."

"As you say," Thane broke in, "I know all that. I know too that the second-stage drive allows practically
instantaneous travel across the warps. But just what does that have to do with your disappearance, and the attacks
that have been made on me?"

"Just this. I am, you know, one of the researchers responsible for the development of the second-stage drive. I
am more than that. I am also the present leader of the Onzarian underground."

Manning Reine relaxed in his chair and sipped his coffee. "At the same time I want you to understand that I am
completely, wholeheartedly loyal to the Allied Systems. As you know, I was educated at Earth University at a time
when that was possible for an Onzarian. I left Onzar for good at the beginning of the Candar revolution, expecting to
devote the rest of my life to research within the A.S. But now I am convinced that Candar must be overthrown if our
own systems are to survive."

"It's a proposition that will take some explaining," Thane said coldly.

"The basic ideas are simple enough," Reine said, "once you see how they fit together. There is, of course,
nothing new about the basic theory of the second-stage drive. Even at the beginning of the ancient atomic era,
scientists were groping for the Unified Field. The basic unified field equations were the first step. Then came the
charting of the electro-gravitic lines of stress in space, which we know familiarly as warp-lines. That was the
foundation for faster-than-light travel, and all that went with it. But of course it was awkward. We could not leave
the warp-lines unless we returned to finite speed. We could change direction only at the intersection of warps. Many
star-systems were far off the warp-lines, and could be reached only after days or weeks of travel at finite speeds."

"All very true," said Thane, "but it still doesn't explain a thing to me. About your place in this or Candar's."

Reine hardly noticed the interruption. He went on, professorially. "The solution has always seemed clear. In
order to travel at will through space, at faster-than-light speeds all we needed to do was to create our own Field with
its own warp-line. If a ship could generate its own electro-gravitic warp it would be able to travel in almost
unlimited directions with no time lapse except for pauses at each warp-line crossed. The power factors were such that an entirely new principle of operation was needed. We have found it in the so-called gold catalyst principle, and we now have a practical, economical second-stage drive."

Thane frowned. "But that would seem to make Onzar less important. Why do we need to worry about them now?"

Reine was about to answer but the door opened and Pyuf was there. "How goes it, duellist?"

"It was a great fight," Thane said, "until you decided to tear up the rules. You forgot to tell me that you included 'kidnapper' in your list of trades."

Reine smiled. "That's just one of many that Pyuf forgot to mention. Forger, propagandist, and political theorist might also have been added." He turned to Pyuf. "I've about covered the technology. Why don't you give our friend the politics?"

"Sure." Pyuf sat on the desk swinging his short legs. "First, though, I'm sorry about the duel, Thane. We had to do it."

"Reine's already assured me of that once or twice," Thane said drily. "I would like to know, though, just how you did it."

"That's simple enough. For months now we've been using the duelling court on Kadenar as an exchange point in the underground. It's been very helpful because of the ease that duellists have in getting through customs. In your case we were lucky. Or I should say that Astrid was quick and intelligent enough to take advantage of a fortunate situation. A few words from her were enough to instigate the Onzarian officer to challenge you. Remember that Onzarians have a tradition of duelling, and you had insulted him. Furthermore, he was still confused from the stoltz artillery."

"Clear enough. But may I ask why you bothered to let the duel go on at all? Why not just take me when we got to the court?"

"We wanted to explain your disappearance. At the same time that you were unconscious, your opponent and the other junior officer were also out. With a touch of post-hypnotic suggestion, they were both quite convinced that the Third Officer had won the duel and that you were dead. We had no trouble getting your 'corpse' back through customs and to Onzar."

"Probably," Thane said, "you had a purpose for all this. Before we go any further, let's have it."

"If you were an agent of Candar we would have eliminated you," Pyuf said. "You had already learned too much, and you had shown that you were a dangerous man. If you were a Liaison agent, it was still necessary for you to 'die.' At the moment, it's imperative that no word of our activity gets to the Allied Systems. And, if we can convince you, we badly need your help."

"I'll take some convincing from what's happened up to now. But go ahead."

"Ever wonder," Pyuf went on, "why the Darzent Empire hasn't attacked? What are they waiting for? They're aggressive. They have the edge in power, with two inhabited systems to one in the A.S. Their technology matches ours and their heavily centralized dictatorship allows them to move faster, at least at the beginning of a war."

"Well?"

"Two reasons. One, they never could be sure that we didn't have the second-stage drive. Two, they couldn't be sure of the allegiance of Onzar."

"Onzar--the whole five systems--is probably more of an armed camp than any other political entity in the Galaxy. But that isn't the real reason for their overwhelming importance." Pyuf jumped down off the desk and flipped a switch on the far wall. The galactic map appeared, with the warp-lines superimposed in red.

Pyuf pointed with his cigarette. "Take a look at those warps. All nine of the principal ones, crossing the Galaxy between the Allied Systems and the Darzent Empire, pass within a parsec of Onzar. A faster-than-light fleet going either way has to surface at the Onzar Confluence. And Candar, no matter how he sounds to you or me, is no fool. He, you can bet, has taken some long quiet looks at a map like this and he knows his position. So does Darzent. So do the people who are presumably running things in the Allied Systems."

Thane stood up. He had been off at the perimeter of the struggle, working in obscure but possibly important systems for the past three years. He hadn't been in a position to see all the factors in the struggle that was shaping up. But now at a glance he saw that Pyuf was probably right. "It makes sense," he admitted, "but what about the second-stage drive? Isn't that supposed to cut across warp-lines? Wouldn't that reduce to zero the strategic importance of our friend, Candar?"

At this, Manning Reine broke in excitedly, "But that's just the point, Thane! Remember I mentioned there were certain limits to the second-stage drive. We can, to a large extent, manufacture our own lines. But they are never wholly independent of the existing natural lines through space. Our dependence on the galactic lines varies from almost zero to almost unitary, depending on our position in space. The Onzarian Confluence has much the same
effect as a whirlpool. Theoretically, we could force our way out of the whirlpool and go through the center of the Galaxy by a different route. But the energy required approaches infinity."

Thane stepped over to the map. He pointed to the Onzarian Confluence. "O.K. There's our bottleneck. But where's the cork? Just how do you figure on stopping a fleet if it does surface at the Onzarian Confluence for two or three microseconds?"

Pyuf slapped the butt of his cigarette across the tray on Reine's desk. "O.K. There, Agent Thane, we reach the point of the whole show. But let's get the story straight from the source." His eyes went to Reine. Reine, pouring his second cup of coffee, looked up. "If you mean me, that's not very accurate. It's true that it was developed in my laboratory but Astrid was the one who saw the hint, originally, and did all the development. I'm not even familiar with all the details." He smiled apologetically to Thane. "We're talking about the Tracer. As a by-product of our main job we discovered a new way of plotting warp-lines. Instead of doing it by mathematics we found a way of plotting warps directly by instrument. Well, I was on the main line of research, and I had three times as much as I could do already. I just regarded this as a curiosity. But Astrid took it and built the Tracer."

Pyuf interrupted. He was not the man, Thane saw, who could abide technical explanations when they had a clear political implication. "The Tracer," he said, "is the cork for your bottleneck. With the tracer, we know when any ship is operating on second-stage drive. With two tracers, separated on a baseline of a few million kilometers, we can plot position closely. Three tracers will pin-point them, and for a trip across the center of the Galaxy, we will know when and where they'll have to surface."

"That fits all right," Thane said, "but why tie in Onzar? Why not let the Allied Systems have the tracer?"

Pyuf shrugged impatiently. "Gentlemen, from here on, we need a drink. The explanation is simple, limpid, computable logic. As far as we can see, it's the only course." He stared pointedly at Thane. "But it also could be construed as treason. So we'd better have a drink." He stepped to the door. "Astrid, will you bring glasses and the bottle? We've got a bit of dialectics to dispense with."

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After Astrid had handed the drinks around, Pyuf downed his. Then he went on. "First of all, Thane, don't get me wrong. Maybe I couldn't pass a security check with some of the boys in the Department of the Outside. Maybe I could, I don't know. I've never tried. But I like the Allied Systems as well as anything the Galaxy has to offer and I want to live there. But let's take a hard look at them." He stopped to pour another glass. "Within the A.S. you have the main federation, and you have a lot of loosely confederated systems. Space only knows what the confederations will do. We can only hope. But look at the rest of them. Every couple of years, absolute, they rear back and elect an assembly of 13,000 members, a really efficient size for a deliberative body. So that sterling group elects a senate of 300 or so, and then goes home. But it reserves a lot of rights, like declaring war. And the senate, of course, goes ahead and elects the council. Which does its best to keep things going."

"I know the system," Thane broke in. "Just what do you want to do about it?"

"I don't want to do anything about it," Pyuf looked up earnestly. "I want to prevent it from being wiped out. And right now the only way that can be done is to work outside it, rather than through it. Or do you want to hold a systems election when the Darzent fleet surfaces at Onzar Confluence?"

Manning Reine was on his feet now. "And they will, Thane, they will. We know there have been security leaks in the development of the drive. It's just a question of time."

Thane calmly reached over and took the bottle from Pyuf. He filled his glass and looked at the bottle, then at Pyuf, Astrid, and Reine. "All right. We have our bottleneck. And we have our cork--the Onzarian fleet. Just how do you propose we shove the cork into the bottle?"

Astrid was the first to answer. "We'll take the fleet! The Onzarians are ready for freedom!" After that they were all talking. The underground had convinced the people of the truth. They were ready to rise up and throw off the yoke of Candar. There was conflict between the government and the religion. The people would not stand any further reduction in their living standards. Two-thirds of the gross product went for armaments now, and the amount was steadily increasing.

At last Thane banged the desk until they had all stopped talking. He looked at them a moment in silence. "All right. You've got your gadgets. You've got your political theory. You've even got your strategy. But there hasn't been an atom's worth of tactics in anything you've said, any of you. I think you're badly in need of some engineering for your revolution."

Astrid walked over and looked up into his eyes. "That's about the way it is, Roger. And that's why we need you so badly."

That was when they began going into details. Strength of the underground, possible allies, weaknesses of Candar... Thane was beginning to see the picture, and the tremendous obstacles to be overcome, when a buzzer sounded and a red light over the door blinked DANGER... DANGER... DANGER....
Pyuf ran over to a cabinet on the wall by the fire. Thane saw there were several dials and a visiscreen. As Pyuf twisted the dials he spoke rapidly over his shoulder to Thane. "We're quite isolated here. The house belongs to the old boy you met in the lab. He's been checked for security by Candar so we figured we were safe here. There's a detection screen about a kilometer hour from the house, and we have a force screen we can use as a last resort. Of course, we'd have to abandon this place once we did use it. Candar's detectors would pick it up right away."

The visiscreen came into focus and Pyuf turned the perimeter dial till it lined up with the degree mark on the disturbance indicator. Nine figures appeared, advancing toward the house. Three were short and squat—not over a meter and a half in height. They walked with the peculiar slouch of the Darzent entity in its humanoid phase. The other six were the Darzent robot infantry. Two and a half meters high, impervious to any hand weapon, with built-in blasters and the Darzent version of the Stoltz gun. Their ship was in the background. It had the outlines of an ordinary atmosphere jet of medium size, but there were alterations which made Thane suspect that it had been refitted for deep space, with at least the finite drive, and probably FTL.

Thane spun around to the others. "We either put up the force screen or get out now," he said. "Unless, that is, there's some heavy artillery around the house. Nothing else will stop a Darzent Robot. And even the screen probably won't last long. That ship looks as though it has enough high powered stuff to breach any screen we can put up."

Astrid looked up at him. "We do have the jet, Roger. It's armed, but it will take time to get it ready for take-off."

"Let's get the force screen up now, then."

Pyuf snapped switches. The whine of power at emergency levels began. The Darzent force had screen detectors, because they stopped at once and turned back to their ship. Short, sharp rocket blasts shot out from the bow tubes of the ship, as it turned on its axis to attack the force screen.

"Let's get going," Thane said.

"We all can't go," Pyuf pointed out. "Our jet is only two-place, and anyway, someone will have to cut off the screen to let the jet out."

"You and I can do it," Astrid said to Thane. "I can handle the engines and the defensive screens while you fly it and man the gun."

Thane considered quickly. If they succeeded in knocking out the Darzent forces they'd be able to get the others out without difficulty. If not, it would be wise to separate Astrid and her father. With one of them, the plan that was shaping up might succeed, but if both were lost there'd be no chance.

"All right," Thane said. "Let's go."

Just then the first attack on the screen came. There was vibration through the room and the needles of the indicators all jumped up over the red lines. The whine of power momentarily became a shriek and then died down.

"That was close," Thane said. "The sooner we stop them the better." He turned to Pyuf. "Drop the screen for two seconds when I signal, to let us out."

The bitterly cold wind cut into Astrid and Thane as they hurried outside. Astrid was ahead, leaning against the wind, running towards the outbuilding which housed the jet. They were in full view of the Darzent attackers who renewed their thrust at the screen when they saw the running figures.

"We won't take time to ease it out," Thane shouted above the wind. "Full power at the start. It'll knock over this shack but that's a small loss at the moment."

Thane climbed into the nose position of the little jet while Astrid slid in behind him. They ran a fast check while the engines warmed. Thane waited for the next attack on the force screen. It came and he gave a short sharp blast to signal their readiness. They had two seconds leeway before the screen went up again. The ship was not fully warmed. Thane flicked on all the rockets and gave the jet full throttle.

There was the barest hesitation, and then they were forced back in their seats, with 5G acceleration. The outbuilding flamed and collapsed behind them. As Thane went into semi-consciousness he pulled back on the control wheel to clear the hill ahead. The corners of his mouth pulled down, his eyeballs felt as if they were being forced down into his cheekbones. His vision became a red blur, then grey....

He came out and looked down. The house and the Darzent ship were tiny blurs in the storm, three kilometers below. He looked back at Astrid. "Make it all right?" he asked anxiously.

He face was white and strained but she managed a smile. "Still with you, skipper. Let's get back down."

"Here we go. Hang on and hope. Keep the screens up till I nod. Then drop them fast." Thane put the jet into a steep dive, lining up the Darzent ship in the sights of the Baring gun. He was ready to fire when there was a tremendous jolt and a flash of light. The little jet was thrown over on its back and Thane fought the controls to steady it.
He went into a climbing turn and saw, above and behind him, the long black shape of an Onzarian atmosphere cruiser. "The protector screens are dead," Astrid cried in alarm. "Whatever that was that hit us burned them out!"

"That was a disrupter." He pointed at the Onzarian cruiser. "Our visitor is playing for keeps." His knuckles went white as he pulled back on the wheel into another long climb with emergency power. Another disrupter burst behind them barely missed.

"They've got everything on us," he said. "Speed, firepower and range. Except maneuverability." He turned to Astrid. "Just how far out is the force screen from the house?"

"Four hundred meters."

"Let's see if we can judge it," he said grimly. "It's going to be close." He put the jet into a tight turn and slipped off into a steep, screaming dive. There was another disrupter burst and a sudden flutter of the controls. He fought them to maintain the dive, straight for the house and its invisible bubble of force. The flutter became worse as their speed increased, and vibration racked the whole ship. He judged the distance by the range-finder on the Baring. At the last moment he pulled out and up. The ship skidded down sickeningly, and then caught. Thane fought bitterly to keep conscious.

They heard the explosion above the sound of the wind shrieking past them. Thane looked down and back. It had worked! The Onzar ship had followed them down, but it had not allowed for the invisible force screen. It had hit the screen, caromed off into a wild, twisting skid, and hit the ground, completely wrecked.

But Thane had time only for a glance. The vibration was getting worse. One more strain and the little jet would be torn to pieces.

He eased out of the climb and tried to put the jet into a long flat glide. It kept slipping off to the right, and the glide increased in steepness. The ground came up and he managed to pull back into a partial stall. At the last instant the jet dipped to the right and hit. It spun crazily on the ground, straightened, skidded and then buried itself in a drift of snow.

He was still numb with shock when he heard Astrid's voice. "What happened, Roger? Why did they attack us?"

"They must have been sent as soon as our force screen was detected. Let's get back."

They climbed out into the biting wind and started towards the house in the distance. The red sun of Onzar was setting and the cold deepened and chilled bitterly as they hurried on.

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It was almost dark when they reached the house. In the lengthening shadows there was no sign of the Darzent ship. They hurried on in growing fear. The front of the house showed the signs of the blast that had knocked out the force screen. Inside the house was dark. All power had been burned out when the screen went. They went in through the smashed, tilted doorway. In the gloom they saw the old medic first. He was slumped in a chair against one wall. His neck was twisted and his head slanted back. His chest was a gaping hole, with the blood already frozen. His assistant lay beside the dead fire, headless. What had been Pyuf was at the instrument cabinet, one hand still on the fused panel. Manning Reine was not there.

There was a tremble of panic in Astrid's voice. "Roger, they killed them ... and ... where is Dad?"

"They killed them deliberately with hand weapons after they knocked down the screen. And they have your father now. That was their purpose."

"What will they do to him? Where have they taken him? Roger, we've got to find him!"

Roger Thane turned to her in the shambles of the wrecked room. The quaver in her voice indicated that she couldn't take much more. He took her arm and led her down the corridor to the laboratory. "We're going to fight back, Astrid, and we're going to win. Right now there's not much we can do for your father. But don't worry about him. He's safe. He's much too valuable to be mistreated by the Darzent Empire. But they will get everything they need from him with their interrogatory drugs."

In the laboratory nothing had been touched. Once the Darzent force had Reine they must have left at once. Astrid's shoulders were shaking as Thane led her to a chair. "We've got a lot to plan and a lot to do. It won't be easy and we'll be fighting all the way. But we'll win if we're steady."

Thane could see the effort Astrid was making. "I'm not ready, Roger. Where do we start?"

"We'll start with what we have, the underground. And Astrid, the really important jobs may be up to you because I'm going to be out of circulation for a while." Astrid looked up with a question on her lips but he went on before she could voice it. "Pyuf mentioned that we have some support among the Onzarian priestesshood. Just what do we have?"

"There's been general dissatisfaction with Candar all through the religion," she said. Her voice was low, carefully controlled, with an undercurrent of stress. "The whole priestesshood feels that Candar is their enemy. They feel that Candar's eventual aim is to destroy every organization not under his direct control. Of course, the church also has a long tradition of remaining aloof from the temporal government. And outwardly, Candar has so far
usually respected the church."

She looked up at Thane. "That's the general picture. Actual proved sympathizers with the underground are scarce, but we do have some important ones. Probably the most important is the Priestess of Keltar, Selan. As she's the head of the church in Keltar, the capitol city, she's at least nominally the head of the whole organization, though it does have a good deal of autonomy. But her word carries enormous weight."

"What's she like?"

"She's old. Very old and very determined. She's always been on the liberal wing of the church. Willing to recognize the changes that have taken place, and to modify the church so that it will maintain its place in the system. She recognizes Candar for what he is but is willing to try to get along with him till someone can show her an alternative with a chance of success. At least, that's how she seemed to me when I met her."

"Do you think," Thane asked, "that she would be ready to help now if it meant the overthrow of Candar?"

Astrid was silent for a long time. Finally she nodded. "I think so. I don't know but I think she would."

Thane glanced at his watch. It might do. And they just might have time for what had to be done. "It's the best chance we have, and it may work. But now we've got things to do. We can use some of the equipment here, and the batteries will give us enough power."

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Thane rapidly explained that he was going back into his own identity, and that some of the equipment present would help accelerate the change-over. He tried to give Astrid the general picture as they made the circuit changes on the equipment.

"Astrid, you are going to turn me in. You are going to surrender me to the Onzarians when they get here."

Astrid stopped. She had been re-fusing a circuit, and the fuse hung limply in her hand, forgotten.

Thane went on. "I'll explain while we finish the circuit. We haven't much time. You remember how we talked of driving the cork into the bottle? Well, that's what we're going to do. The Onzarians will be here before long when they've discovered their cruiser is missing. You will pass as an Onzarian. As an acolyte of the religion, you'll turn me over to them as a spy."

They had finished the identity accelerator circuit. Thane wasn't sure the rough equipment would do, but it might be close enough. He'd try it. He climbed on to the laboratory table and showed Astrid how to make the connections.

"I'm using all the power we have," he said. "I'll be out about 13 minutes, absolute. If they get here before then do everything you can to keep them out till the time's up."

Astrid looked down at him lying on the table. She was very serious, very quiet. She brushed her lips lightly against his forehead and said softly, "We'll manage."

She was gone and Thane heard the hum of power.

It went on and on, in the easy world of change. And then the power was gone. Thane struggled to open his eyes, minutes, years before he should. He looked up into the cold, unfriendly eyes of an Onzarian lieutenant.

Astrid appeared beside the lieutenant. She talked rapidly in Onzarian. Her manner was imperious, "He's the one. He did it all. He attacked us here, and after he had killed the others he admitted to me that he was a spy for the A. S. He would have killed me, too, if you hadn't come, lieutenant."

The lieutenant said harshly, "He won't trouble anyone now. Candar, himself will deal with him."

Thane was pulled to his feet by two crew members. Each grasped one of his arms, and they took him out of the house to the waiting Onzar cruiser. Inside the ship one of them opened a reinforced door and shoved him into a tiny cell.

Thane had been in jails before on other systems. Their politics varied but their jails were about the same. He didn't like it, but he did know what to expect. There was the take-off, and the trip to the sector patrol station. The lieutenant told his story and they questioned him, in a cursory, routine way. He was an important political prisoner and there were experts to take care of the questioning later on. Then there was another ship, and they flew through the long, bitterly cold night to the capitol city, Keltar. More guards, more questions on arrival. The receiving station. And finally the trip through the ancient streets of Keltar to the palace prison.

The cell there was just as small, just as dark, just as dirty as the others. But at least he was in a cell by himself. He was alone, and would have time to think through his plan.

Time went by. Thane, without light, without sound, did not know how long. But long enough. Long enough for the Darzent Empire to learn about the second-stage drive, from a drugged Manning Reine. Long enough to begin to equip their fleet with the drive. Could one man stop their attack? Thane wondered, and planned, and waited impatiently.

No prison sounds. No noise of any kind. Until suddenly the duralite door opened. "Let's go," the gruff Onzarian voice said.

Outside the cell door Thane's eyes gradually focused in the light. The guard was one he hadn't seen when they'd
brought him in. Apparently he'd been in the cell through at least one watch, possibly longer. They walked down the long row of doors to the registry room.

The room was bare except for a bench along one wall, a chair and a small table. A non-com sat behind the table. He began to ask the usual questions. Thane answered in a flat, dull voice, and the non-com filled out a form, scribbling on a line or checking a box as each question was answered. Finally he shoved the form aside and looked up at Thane for the first time. "Oh, an Alien, eh? That should be interesting for you." He jerked a thumb at the bench. "Sit there till you're called." Thane went over to the bench. He saw that the non-com had lit a cigarette and was staring into endless boredom.

For long, empty minutes nothing happened. Then there was noise at the outer doors. The doors opened and two burly guards entered. Astrid Reine was between them.

They dragged her up to the desk. "They told us to bring her here."

The non-com looked up. "What's the purpose?" That, Thane was sure, was the correct translation of the Onzarian. Not 'charge,' not 'offense,' but 'purpose.' It was a one-word explanation of Candar's whole system of justice.

"... and she claimed to be an acolyte of the church," the bigger guard was saying. "Gave the name of a registered acolyte and everything. And funny thing, the Priestess of Keltar vouched for her. Had to let her go. But then we found out that the acolyte she was supposed to be was across the continent, in Akra. We picked her up just as she was leaving the cathedral." At the end of his long speech, the guard sucked in his breath and blew it out, hoarsely.

The non-com merely sighed, picked up his pad of forms, and began his questions. Astrid answered most of the questions in a monotone. She gave no sign that she had seen or recognized Thane. He noticed that on a few of her questions, her voice went up. He saw why.

The non-com had finished the body of his form and was filling in the "remarks." His stylus poised, he asked, "Why did you go to the priestess?"

Astrid's voice went up as she answered, "She's all right." Then her voice went back to a dull monotone. "I--I was confused. After I'd told them I was in the church I thought she would help me. But she couldn't."

"What were you trying to do?"

"I've done everything," she said in that slightly altered tone. "I don't know what I was going to do. I've been so confused." She bent her head and began to sob.

"Take her away," the non-com said. The two guards led her into the cell block. As they left, the intercom buzzed beside the non-com. He answered and gestured to Thane. "Time for you, Mister. Stand up and wait."

Two officers of the guard entered. The gold on the uniform of one indicated that he was at least a commander. They took him between them, without a word, and went out.

The wind tore at them as they walked across the palace court. Each sentry snapped to attention as they passed. Inside, they were inspected formally by a guard and more efficiently by a battery of detectors. They hurried on. After halls, corridors, steps, grav-wells, and more guards, they reached the door. One final check and they were through.

Glistered--that was the word--the whole room glistered. Gold inset in the wall panels. Golden arms on the chairs. Gold plating on the ceiling. A gold shagell, wings outstretched, at one corner of Candar's enormous desk. And Candar, in a perfectly plain uniform, staring up at him from behind the desk. His own expensive way, Thane considered, for showing his contempt for the gold fetish of the church.

Candar looked up at him steadily for a moment without speaking. Then: "I always greet the emissaries from the Allied Systems personally. They always have so much of interest to tell us in one way or another sooner or later."

Thane stared back and said, "You are right. I have information that will save Onzar if I give it to you. Perhaps, using your methods, you could get it eventually. Perhaps not. But eventually is too late, Candar."

Candar picked up a small gold knife. "Go on," he said, "but do not bluff. I do not like bluffs."

"There is no question of bluffing," Thane said impatiently. "But there are other matters that must be settled before I will go on."

"Just what would you have us settle, spy?" Candar asked sardonically.

"First, the matter of my own immunity. I'm being hunted throughout the Galaxy. The Allied Systems are searching for me. Darzent agents have attacked me twice. I have disregarded orders and I'm about to commit treason if I'm assured of safety."

Candar put down the knife and leaned forward. His voice showed his reluctant interest as well as his habitual suspicion. "Tell me why, spy. Why should I assure your safety?"

Thane said scornfully, "I didn't say that you should assure it. I said I wanted it assured. And it will be. If it isn't,
you'll be wiped out, and what's left of the Onzar system will be in slavery."

"You may think, Systems Spy, that you know the kind of death you will die if this is a trick," Candar said slowly and coldly. "But you do not. There are specialists here, experts whose life work is the gradual dispatching of men who try to trick Candar." He paused for a moment. "If you can prove what you say, I, Candar, will personally guarantee your safety and immunity."

Thane snorted. "You'll get your proof, but not on your personal guarantee. You'll transfer me to the custody of the church on the condition that I'll be turned back to you if I can't prove everything I say."

Candar pushed himself to his feet. Thane could see the veins throbbing in his forehead. "That's enough!" The harsh voice mounted to a roar. "You have insulted Onzar and its ruler." He turned to his officers. "Take him out. We'll see what he knows, and how much he can stand before his death."

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The room they entered was a spotlessly clean room, an antiseptic room. Thane wondered how often the blood was scrubbed from the floor as he recognized the instruments.

They pushed him into a chair and strapped him down. "Now let's see what he'll take," Candar said. The commander himself applied the fittings and turned on the switches. Then the pain came. In long shivering waves. No body pain. Just pure pain, applied directly to the synapses of his brain. It was unbearable--and then it got worse. It went up and up. Through a dim red haze, Thane saw Candar shove the dial up still another notch. Then he blanked out.

As he came back he looked up at them. Stinging drops of sweat blurred his vision but he managed to smile. "Now try your psychograph. Just try it. Here's what you'll read: conditioned against physical torture. Brain waves lack stable pattern. History inconsistent. Standard drug susceptibility predicted negative. Then decide, friends, if I'm bluffing."

Candar growled, "Do as he says."

The test was run. They looked at the results. All three of them walked over to the corner of the room behind him. With his head strapped he could not see them. He heard their conversation in undertones. He broke in. "There's your choice, Candar. Kill me or turn me over to the church. And if you're afraid to know what's coming, if you're afraid to know how you're going to die, you'd better kill me now."

There was a long silence. Then Candar: "Unstrap him." Candar walked up and stood before him as the straps were taken off. "You'll curse yourself for postponing the end, if this is a trick. The transfer papers will be prepared now." He gestured to the commander. "Bring him back to my chambers, and call the emissary of the church." The door slammed jarringly behind him as he strode out.

When the conditions were made out, signed and countersigned and sealed, and a copy transmitted to the Cathedral of Keltar, and when the young emissary in cloth-of-gold had signed the receipt for him, Thane began. "At this moment," he started, "the Darzent Empire is preparing an attack. They have a space-drive, stolen from the Allied Systems, which allows almost instantaneous travel through the Galaxy. You will learn of this drive, and you will learn something that Darzent does not know. You will learn how to locate any ship using this drive at any time the drive is in operation."

That was enough to stimulate Candar's driving, paranoid megalomania to the full. Thane had already threatened him with destruction. Now he held out to him the opportunity to be master of the Galaxy. Thane felt it would be simple now to obtain the transfer of Astrid to the custody of the church. He thought so, but there was another hour of argument before he had overcome Candar's suspicions and convinced him of the absolute necessity of having Astrid to supervise the building of the Tracer and the Drive.

At last it was settled. Then Thane committed his treason. He told all he knew, about the second-stage drive and the tracer, and when Astrid came in, she finished the job. Between them they gave away the most important secrets of the Galaxy to an enemy, a man of endless, pathologic ambition.

* * * * *

Candar, of course, wanted confirmation. It was fast in coming. With all the technical resources of Onzar at her disposal, Astrid had a prototype of the tracer in operation the following day. An hour later the existence of a ship using the catalyst drive was reported by the tracer. Its position could not be determined until a base line had been established. The following day, three more tracers were set up at widely separated points across the planet. More movement of ships was reported--and they were definitely placed within the Darzent Empire. One more day passed, and more tracers had been set up on Onzar III, across the sun from the capitol planet.

At the same time, Candar pushed work on the second-stage drive with all possible speed. As Thane had guessed, the use of gold in the catalyst principle gave Candar pause, but only momentarily. It was true that such a use of gold violated one of the oldest and strongest taboos in the religion but Candar's hunger for power was stronger than his fear of revolt. As Thane had supposed, Candar went ahead with the development of the drive,
thinking that when he had it his power would enable him to ignore the church. The church was powerful on just this system. With the drive, Candar would rule the Galaxy.

Candar had taken certain precautions. Almost complete radio silence had been clamped down, partially to prevent any information getting out, and partially to provide enough power for the tracer. No ships of any registry could enter or leave the system. Only his personal adherents of unquestioned loyalty were allowed to work on the assembly of the drive. But there were leaks. And there was Thane....

With one legal pretext after another, Candar had succeeded in keeping Thane in isolation within the palace for three days. Finally, he gave in to the demand of the church that Thane be turned over to the Cathedral. He did not want Thane loose but still he could not afford a break with the church just a few days before his great victory.

So Thane at last managed to see Selan in her personal chambers in the Keltar Cathedral. It was a small, comfortable room that did not seem to share the bleakness of most of Onzar. Perhaps, as much as anything, that was due to the personality of the Priestess Selan. She was very old. She had remained slim, and her lined face retained much of its original golden color. Her yellow eyes were alert. The only term Thane could think of for their expression was cynical compassion. She sat by a small writing table in one of the traditional, intricately carved chairs of Onzar.

"The developments of the past few days, Priestess Selan, are of extreme importance to Onzar and the church. The tracer device has already confirmed our belief that Darzent is preparing to attack. Already their trial maneuvers with the second-stage drive have ceased, and they have begun the marshalling of their fleet. When they come, they must come through the Onzar Confluence, not more than a parsec from this system. This attack must be stopped, and we hope that time enough is left."

"I am aware of these developments, Roger Thane," she said with a slight smile. "We still have our sources of information."

"Perhaps," Thane said, "you are also aware of the industrial use of gold in the second-stage drive?"

"We have heard rumors," she said wearily, "but perhaps my position on such matters is not clear to you. I have never been a religious doctrinaire. I have lived through tremendous changes on this planet, and I know that the church must conform to survive. You certainly must know that from the history of religions in your own system. The church is conservative, yes. It can never move with the skeptical flexibility of the politician or the scientist. But it must change with them, sometimes leading, sometimes following. Otherwise it becomes a thing of quaintness, a building without an institution, a place for tourists."

Thane regarded her thoughtfully for a moment. Even this brilliant, experienced woman would be ensnared by her own long-range theories into a disastrous inaction in the short-run crisis. And there would be no long-range for her or her church unless there were victory in the present crisis. He said, "I agree with you completely. Like any organism, social or biological, the church must adapt to continue. You certainly must know that from the history of religions in your own system. The church is conservative, yes. It can never move with the skeptical flexibility of the politician or the scientist. But it must change with them, sometimes leading, sometimes following. Otherwise it becomes a thing of quaintness, a building without an institution, a place for tourists."

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"I know," she said thoughtfully, "that Candar has never been friendly to the church. But I do not believe that he has the power to destroy it."

"Up to now," Thane answered, "Candar has been limited. Now, with the drive, he feels that unlimited power is his. His dream is to crush the power of Darzent in this attack, and then to turn upon the Allied Systems. I do not know if his dream of complete domination of the Galaxy can be realized. I do not think so. But it is something he will not put away. And when he makes the attempt, it will mean the destruction of millions, the killing of whole planets, the ending of all life of whole systems."

"There is no need to keep the useless old taboos that no longer fit into the present world. But they should be ended by the church itself, in its own time and its own way, not abrogated by a contemptuous politician."

She looked half-convinced, and he pressed his point at once. "The power of the whole planetary communications system is now being used by Astrid Reine for the tracer system now being built. With a word from you the whole radio system will be at your disposal for as long as we can keep it open. You can at last tell the people of Onzar the truth, which they have not heard for so long."

Selan stared at the floor for a long time. Finally she looked up. "I don't know. I just don't know." She paused again, and it was a long, agonizing pause for Thane. "The decision is too large for me now. It is a seizure of authority that goes against my whole nature." She looked directly at Thane. "But, be assured, you will have my word in time. You and I will witness this battle of the confluence, and then you will know my decision."

Thane's mind was full of reasons why the old priestess should not travel out into space, with all the stresses of that travel, to a position of great danger. But he met her determined eyes and saw at once that all arguments would be futile.

He got up to leave, and with the sincerest of respect, lied to her. "Your decision will be mine, Priestess Selan."
The ship used by Selan in her trips through the system was little larger than the usual scout class but it had been completely refitted for her purposes. She'd had a special acceleration couch built in to allow her to survive the stress of space travel. And Thane noted that the large visiscreen would be ideal for watching the battle. And the communications system was larger than usual. It might do for his purpose.

They stayed well back from the restricted area where the whole Onzarian fleet was orbited. On the screen images appeared—twenty-three Class I cruisers, each with its own fleet of cruiser escorts, scouts, disrupter carriers, tenders and screen amplifiers. Swarms of independent tactical squadrons. Controlling all of them, ready to put them into instant action, was the battle-control cruiser, with its tracers, its receivers, its computers, its nearly automatic message center—and Candar and his staff.

Thane turned to the tracer that had been installed. Selan was by his side. He switched on its galactic screen. The Darzent marshalling was now almost complete. A few flashes of light still crossed the screen, crossing countless light years at each jump, pausing, and then a vault through more light years. As Thane and Selan watched, the flashes changed direction. The marshalling was complete, and the assembled might of Darzent was on its way. Thane found it hard to believe that even the fleet waiting before him could cope with all the force of Darzent.

The Darzent fleets had started from points spanning the whole Galaxy. With each flash of lights they converged, arrowing toward the Onzarian Confluence. Thane could imagine the watchers at similar screens in each ship of the battle fleet. Eyes becoming, grimmer, nervous smiles appearing and disappearing on faces, hands clenching on instruments. And the waiting.

The flashing lights approached closer. The lead group of lights appeared, ten light years from the tiny orange circle marking the confluence. There was a pause—somewhat less than a second—and the lights appeared on the circle. Thane spun around to the visiscreen. The lead battle squadron of the Darzent Fleet had appeared there simultaneously, surfaced in space. Seven of the battle cruisers fired as one, and were joined by all the firepower of their escort ships.

The disrupter blasts, joining together, created a blinding sun in empty space. It was there. It was gone. And then just dead, empty space again, but without the slightest hint that the lead squadron of the mighty Darzent Fleet had ever been there. Thane quickly looked over at the galactic map to see if they could have managed to get back into warp-line drive. No, there were no lights below the circle of the confluence. But another light was approaching from above, still ten light years away. Thane turned back to the visiscreen just as the second division of Onzar's fleet opened fire on the surfacing Darzent forces. Again utter annihilation.

The battle continued, with more surfacing squadrons, more eruption, disappearing suns. Thane turned away, losing interest in the well-planned slaughter. Here, a parsec away from the Onzar system, they were well outside the intersystems communication jam. Selan's horrified attention was still completely on the battle. Thane stepped back into the communications section of the scout and flicked the powerful space set into life. Static from the now almost constant disrupter blasts ripped and crackled across the hum of the set. There was just a chance, he considered, that he could get the relay station at Kadenar.

He worked rapidly, setting the frequency, the directional beam, the gain control. It was only a question of time before the detector would pick up the clear beam on the Onzar fleet, even in the midst of battle. At last it came through.

Across space, the automatic code responder finally could be heard. Thane gave his own code and said, "A direct to Garth. Top urgent."

"That code has been changed," the mechanical voice replied at once. "Give current code."
"But I've been out of touch," Thane said, "and this must go through."
"That code has been changed," came the same, unvarying reply. "Give current code."

It was no use. With the mechanical monitor working he'd never get through. And of course they would have changed his code, after his disappearance and reported death. He began to talk rapidly giving his instructions. He couldn't get through to Garth, but there was the chance that someone would see the recording in time to act. Damn the mechanical efficiency of Liaison!

Now Selan was all he had to depend on. He started back to the forward compartment hoping that Selan had at last made her decision. The battle was still going on and lights were still flashing down the galactic screen to sudden, unwitting death. The bulk of the Darzent fleet had been destroyed and Thane saw that Candar had changed his tactics. Now, instead of disrupters, he was using concentrated, high-power Stoltz artillery.

After destroying the mass of their power, Candar was going to bring in the staff ships, with the fleet admirals as captives. It would immobilize whatever power Darzent had in reserve while Candar turned on the Allied Systems. Already, confused and blinded Darzent ships were drifting in space, with Onzar wrecker tugs swarming in on them.

Thane turned to the old priestess Selan. "Don't you see the crisis that is shaping? Don't you see what Candar intends? When this is done and he has re-powered, he'll turn on the Allied Systems. They'll fight back of course, but
the war will make a shambles of the whole Galaxy. Don't you see?"

She turned slowly and looked at him. Her eyes seemed older, much more tired than they had before. "I have seen it, Roger Thane, and this cannot be repeated. It will not happen again. It is against all my training and belief and the tenets of the faith, but I, as Priestess of Keltar, will take it on myself to attack the temporal power."

* * * * *

Thane felt the sweat on his hands, and his smile was stiff though it was certainly heartfelt. So much depended on this woman's decision and on her performance from now on. Without the aid of Liaison to depend on it was up to this woman to prevent galactic war.

They started back for Onzar II and Keltar at once. They would have a good start on Candar while he was engaged in mopping up the Darzent fleet. Thane felt sure that Candar would stay to confront the high-ranking captives and to gloat over them. On the other hand Candar would not delay too long. He would be back to announce his victory and to prepare for the attack on the Allied Systems.

At the landing port outside Keltar, Selan's automatic anti-grav was waiting. It took them up over the outskirts of the bleak wintry city and towards its center. As they reached the solidly built-up area Thane could see the dim outlines of the old city wall beneath them. Not so many years ago, as time went in the Galaxy, that wall had been a vital protection against the spears of the hill men. And now Onzarians were in space, blasting away the power of a third of the Galaxy. But still, the descendents of the hill men, the descendents of the plains dweller, the city builders, were living here, underneath him.

In the midst of their technological revolution they were still living in their ancient superstitions. Still the old awe of the Word of the matriarchal, matrilineal church. Still the compulsion to have their little gold symbols of rank sanctified and made real. Still the.... Thane paused in his thoughts as he saw flames leaping into the night sky from a blast furnace, producing some of the finest alloys in the Galaxy. It was still the same, he hoped.

In another moment they were over the towering white shaft of the communications center. Then they slowly let down. Thane thought that Candar's constant suspicion, his unending compulsion for infinite control, direct control, was playing into their hands here. The communications center was exactly that. It controlled all electronic communications with the capitol system, and could easily tie in with subject systems. But how much time did they have? Thane didn't know. With luck, they'd have a few vital moments for the voice of the Holy Church to go out over the planets.

The anti-grav settled gently on the upper terrace. Thane helped Selan out into the stinging cold of the Onzar night. Just inside the gloomy passage to the grav-well a harsh voice sounded. "Halt!"

They stopped. Thane made out a uniformed man, his hand on his holster.

"We have come at the call of Astrid Reine," Thane said. "She wishes our assistance."

"All who come for the thirteenth level must have the code word. Give it and you will pass."

Thane's right arm went up and the side of his stiff hand flashed down, hitting the sentry between his neck and shoulder. The man's pistol was almost aimed at Thane when Thane hit. The guard relaxed and gently fell into an inert heap on the deck. Thane bent and took the blaster from the guard's inert fingers. He looked a moment and found a Stoltz. He took that, too. He straightened up and turned to Selan. "Sorry," he said. "We can't risk an examination now, and there's no time to lose. He'll be all right." Thane picked up a hand-control from the ledge in the sentry's cubicle and led Selan to the well.

They dropped gently, interminably. At last they reached "13." From the distance they had dropped, Thane judged they were far underground if this grav-well was timed as most were. He held Selan's arm and stopped their descent with his hand control.

They stepped out into a darkened corridor. A sentry was waiting. There was no 'halt!' this time. Without a signal from the roof they were automatically enemies. The blast echoed along the corridor. In the dim light the sentry's aim had not been good but Thane felt the first sting in his right arm. He aimed and fired the blaster with his left hand, and thus solved the problem of the sentry. They went down the corridor.

Thane pushed open the first lighted door with his foot, his right arm hanging useless. The blaster was ready in his left. Astrid looked up, sitting at a table. She ran to him.

"Roger, you did make it. You can't know how hard this waiting has been. I was sure you would make it but I've gone through days without hearing a thing."

He held her clumsily with his left arm, the hand still gripping the blaster, and winced when she pressed against his right shoulder. "We've made it so far, Astrid," he said, "but the biggest job is still ahead. How long can we keep the channels open for a newscast?"

Astrid stepped back, puzzled. "As far as the power goes, indefinitely, I believe. Of course there haven't been any newscasts since I've been here. All the power has been used for the Tracer. But it's easy enough to switch over. And all the other planet stations and systems stations are primarily just amplifiers and transmitters for this one."
"If the broadcasts haven't been on the air, what about the receivers? Will anyone be listening if we put a speech on?"

Astrid smiled. "We can take care of that. Candar installed a system for use on his own speeches. Each receiver automatically goes on when he is speaking."

"That's it, then," Thane said. "Switch all the power from the Tracer to the newscast beam. Put the Priestess on the circuit and I'll try to keep it open." He turned to Selan. "How long will you need?"

"Ten minutes will be enough," she said with determination.

"Let's make it fifteen to be sure," Thane said. "I'll be on the roof doing what I can to hold off whoever shows up. Meet me there in fifteen minutes if everything is all right, or come at once if anything at all goes wrong."

Astrid noticed that he had been hurt. "Your arm, Roger! What happened? Can I do anything for it?" The deeply concerned look in her eyes made him feel that he was a little more to her than just a part of an underground conspiracy.

"The arm's all right," he said. "A sentry grazed it. I'll see you." He turned away and started back for the roof.

VII

There was a throbbing ache in his arm as he went back up the grav-well. He held the control in his teeth and twisted it with his left hand as he reached the roof level. He stepped out. The cold had deepened and the wind was bitter. He stepped over the unconscious sentry and placed his guns on the ledge before him. He twisted the dial of the Stoltz to 'lethal' and to 'max area.' With that sort of adjustment the Stoltz was dependable only for very short ranges, but he had to have something ready against a mass attack. The blaster was a precision, aimed weapon, and would do for one at a time.

The cold soaked in. His arm numbed and then ached, and numbed again. Thane waited. He had no way of knowing what Selan was saying or what effect it had in the minds of the Onzarians. Or did he? The normal street noises below seemed to be changing. Through the noise of the wind, a dull, confused murmur came up from below. That might be mass anger.

Thane picked up the blaster and walked over to the parapet. Far below he could see that crowds were beginning to gather in the street. Some were clumped around street loudspeakers.

There was a hum overhead. Thane spun around and looked up. A police patrol was just overhead. As it settled Thane threw himself flat on the icy tile. There was an immediate shrieking pain from his injured right arm. He gritted his teeth and aimed as the door of the anti-grav opened. The flash of his blaster was a bright orange in the night air. The man on his side crumpled. Thane was on his feet at once and dashed to the door of the patrol. One more flash of the blaster and the other occupant tumbled out the other side.

Thane hurried back to the sentry booth for his Stoltz. There would be more. As he reached it something hit him hard. He fell back towards the patrol anti-grav. A hand went around his throat and tightened. A knee came down on his right arm. He wavered on the brink of unconsciousness. He fought his way back.

He jabbed savagely with the stiff fingers of his left hand and caught his opponent under the jaw. Thane pushed upward and back as hard as he could. Thane felt the hand loosen on his throat. Thane came up as the man went back. As they both reached their feet Thane saw it was the sentry. They struggled for a moment on the edge of the parapet. Then the sentry made a last grab and went over.

Thane felt the sweat condense and freeze under his clothes as he searched for his lost blaster. He found it and started back for the entryway. Three more police ships were coming towards the roof. At that moment the grav-well door slid open and Astrid and Selan stood before him.

The first police ship fired before it landed. The blast came before Thane had reached Astrid and Selan. He saw Selan crumple. She was dead when he touched her. He had the impulse to do something, to say something, for one who had forced herself to do so much. But there was no time. He thrust the blaster at Astrid, who was still staring at the dead Selan. "I'll try to get them with the Stoltz. You hit anything that's dangerous with this!" He grasped the Stoltz from the ledge and stepped forward. Running figures were coming towards them now. He waited with a weary sort of calm for them to come close enough. An explosion burst the tile just off his right heel. He waited. Finally he pressed the impeller of the Stoltz. The wide-angle shot dissipated the power, but it did include all of them. They kept coming forward. One of them raised an arm and there was a blinding flash. Thane firmly pressed the impeller again as he fell forward.

* * * * *

There was a voice, and Thane tried to get ready for what was coming but it was too much effort. Anyway, the voice went away. And then someone else was there, and someone else was saying something important, if he could only catch it ... and then movement, up, and around, and down.

When Thane finally opened his eyes Garth was standing over him biting his cigar. "They tell me you've
committed treason," Garth said.

Thané looked up at him steadily. "I guess that's right," he said.

"I suppose you know what we're going to do."

"I suppose so...." and Thane stopped. Full memory was coming back, and all its implications. "Wait ... it's all wrong. What are you doing here? And where is here? And ... if you're here--if we're together, then it must have worked! It must have worked!"

Garth lit his cigar. His face changed slightly. It might have been a smile. "Yes. It worked. The old girl really hit the Onzarians. They hadn't heard any news at all in all the days of radio silence. Then their sets came on and there she was telling them that all their gold gimmicks were no good any more. That death was approaching for all of Onzar. That Candar had ... well, you can hear the recording of it. She meant every word and they acted as if they believed every word. Of course, they'd been conditioned to that with the propaganda newscasts. But after the long silence she really hit them."

Some one moved at Thane's other side. He turned his head. It was Astrid. She was scowling at Garth. "You're a mean, bitter old bureaucrat," she said mockingly, "talking to Roger like that."

Garth's face twisted into the approximation of a grin. "Well, there actually were treason charges against him for a time. But I will say that things have changed."

Thané looked from one to another and then overhead. What he could see of the room looked vaguely familiar, but.... "Where are we?"

"At the space station," Astrid said. "Dad and Garth are working over a treaty between Onzar and the Allied Systems."

"Dad? Then Dr. Reine was rescued? But how?"

They both started talking. A moment later Manning Reine joined them, looking paler and more haggard than before. All three of them talked, constantly interrupting each other. Gradually Thané got the essential details.

After the first impulsive, unorganized revolt, the church took over. It, at least, had an organization. A large part of the armed forces had joined in. Some, though, had stayed on Candar's side, and there had been sharp, bitter fighting. But by the time Candar landed it was about over. This was his greatest victory. He had destroyed the power of Darzent, and was bringing back, as captives, most of the leadership of the fleet and of Darzent. In addition, there was Dr. Reine, who had been discovered in captivity, on the leading staff ship. But when Candar stepped out into the spaceport, instead of meeting his adulating subjects, a very determined group of his own soldiers stopped him.

Thané finally turned to Astrid. "But how did we get away? The last I remember...."

"You got them all, Roger. One of them hit your leg with a blaster as he went down. All I had to do was to get you to the anti-grav, and out of there."

Thané moved the leg, experimentally, and winced. "How is it?"

"Surface burn and shock," Astrid said. "In a week you can ski on it."

"Skiing--haven't done that since I was at Earth University." He thought for a moment. "How did you get into it, Garth? Did my message get through to Liaison?"

"Oh, yes. We picked up the recording an hour or so after it was recorded. I listened to it myself, and it convinced me. It sounded like you, and I could sort of see what you might have done. I shoved every available Liaison in the adjacent sectors right into Onzar, on my own responsibility. It worked out as it turned out. All they had to do was to clean up the tag-end of things."

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Contents

HANGING BY A THREAD
By Randall Garrett

*It's seldom that the fate of a shipful of men literally hangs by a thread--but it's also seldom that a device, every part of which has been thoroughly tested, won't work....*

Jayjay Kelvin was sitting in the lounge of the interplanetary cargo vessel Persephone, his feet propped up on the low table in front of the couch, and his attention focused almost totally on the small book he was reading. The lounge itself was cozily small; the Persephone had not been designed as a passenger vessel, and the two passengers she was carrying at the time had been taken on as an accommodation rather than as a money-making proposition. On the other hand, the Persephone and other ships like her were the only method of getting to where Jayjay Kelvin
wanted to go; there were no regular passenger runs to Pluto. It's hardly the vacation spot of the Solar System.

On the other side of the table, Jeffry Hull was working industriously with pencil and paper. Jayjay kept his nose buried in his book—not because he was deliberately slighting Hull, but because he was genuinely interested in the book.

"Now wait," said Masterson, looking thoughtfully at the footprints on the floor of the cabin where Jed Hooker had died. "Jest take another look at these prints, Charlie. Silver Bill Greer couldn't have got much more than his big toe into boots that small! Somethin' tells me the Pecos Kid has...."

"... Travelled nearly two billion miles since then," said Hull.

Jayjay lifted his head from his book. "What?" He blinked. "I'm sorry; I wasn't listening. What did you say?"

The younger man was still grinning triumphantly. "I said: We are approaching turnover, and, according to my figures, nine days of acceleration at one standard gee will give us a velocity of seventeen million, five hundred and fifty miles per hour, and we have covered a distance of nearly two billion miles." Then he added: "That is, if I remembered my formulas correctly."

Jayjay Kelvin looked thoughtfully at the ceiling while he ran through the figures in his head. "Something like that. It's the right order of magnitude, anyway."

Hull looked a little miffed. "What answer did you get?"

"A little less than eight times ten to the third kilometers per second. I was just figuring roughly."

Hull scribbled hastily, then smiled again. "Eighteen million miles an hour, that would be. My memory's better than I thought at first. I'm glad I didn't have to figure the time; doing square roots is a process I've forgotten."

That was understandable, Jayjay thought. Hull was working for his doctorate in sociology, and there certainly wasn't much necessity for a sociologist to remember his freshman physics, much less his high-school math.

Still, it was somewhat of a relief to find that Hull was interested in something besides the "sociological reactions of Man in space". The boy had spent six months in the mining cities in the Asteroid Belt, and another six investigating the Jovian chemical synthesis planes and their attendant cities. Now he was heading out to spend a few more months observing the "sociological organization Gestalt" of the men and women who worked at the toughest job in the System—taking the heavy metals from the particularly dense sphere of Pluto.

Hull began scribbling on his paper again, evidently lost in the joys of elementary physics, so Jayjay Kelvin went back to his book.

He had just read three words when Hull said: "Mr. Kelvin, do you mind if I ask a question?"

Jayjay looked up from his book and saw that Jeffry Hull had reverted to his role of the earnest young sociologist. Ah, well. "As I've told you before, Mr. Hull, questions do not offend me, but I can't guarantee that the answers won't offend you."

"Yes; of course," Hull said in his best investigatory manner. "I appreciate that. It's just that ... well, I have trained myself to notice small things. The little details that are sometimes so important in sociological investigations. Not, you understand, as an attempt to pry into the private life of the individual, but to round out the overall picture."

Jayjay nodded politely. To his quixotic and pixie-like mind, the term overall picture conjured up the vision of a large and carefully detailed painting of a pair of dirty overalls, but he kept the smile off his face and merely said: "I understand."

"Well, I've noticed that you're quite an avid reader. That isn't unusual in a successful businessman, of course; one doesn't become a successful businessman unless one has a thirst for knowledge."

"Hm-m-m," said Jayjay.

"But," Hull continued earnestly, "I noticed that you've read most of the ... uh ... historical romances in the library...."

"You mean Westerns," Jayjay corrected quietly.

"Uh ... yes. But you don't seem to be interested in the modern adventure fiction. May I ask why?"

"Sure." Jayjay found himself becoming irrationally irritated with Hull. He knew that the young sociologist had nothing to do with his own irritation, so he kept the remarks as impersonal as possible. "In the first place, you, as a sociologist, should know what market most fiction is written for."

"Why ... uh ... for people who want to relax and--"

"Yes," Jayjay cut in. "But what kind? The boys on Pluto? The asteroid slicers? No. There are four billion people on Earth and less than five million in space. The market is Earth.

"Also, most writers have never been any farther off the surface of Earth than the few miles up that an intercontinental cruiser takes them."

"And yet, the modern 'adventure' novel invariably takes place in space."

"I can read Westerns because I neither know nor care what the Old American West was really like. I can sit back and sink into the never-never land that the Western tells about and enjoy myself because I am not forced to
compare it with reality.

"But a 'space novel' written by an Earthside hugger is almost as much a never-never land, and I have to keep comparing it with what is actually going on around me. And it irritates me."

"But, aren't some of them pretty well researched?" Hull asked.

"Obviously, you haven't read many of them," Jayjay said. "Sure, some of them are well researched. Say one half of one per cent, to be liberal. The rest don't know what they're talking about!"

"But--"

"For instance," Jayjay continued heatedly, "you take a look at every blasted one of them that has anything to do with a spacecraft having trouble. They have to have an accident in space in order to disable the spaceship so that the hairy-chested hero can show what a great guy he is. So what does the writer do? He has the ship hit by a meteor! A meteor!"

Hull thought that over for a second. "Well," he said tentatively, "a ship could get hit by a meteor, couldn't it?"

Jayjay closed his eyes in exasperation. "Of course it could! And an air-ship can run into a ruby-throated hummingbird, too. But how often does it happen?

"Look: We're hitting it up at about one-fortieth of the velocity of light right now. What do you think would happen if we got hit by a meteor? We'd be gone before we knew what had happened.

"Why doesn't it happen? Because we can spot any meteor big enough to hurt us long before it contacts us, and we can dodge it or blast it out of the way, depending on the size.

"You've seen the outer hull of this ship. It's an inch thick shell of plastic, supported a hundred feet away from the steel hull by long booms. Anything small enough to get by the detectors will be small enough to burn itself out on that hull before it reaches the ship. The--"

* * * * *

Jayjay Kelvin was not ordinarily a man to make long speeches, especially when he knew he was telling someone something that they already knew. But this time, he was beating one of his favorite drums, and he went on with his tirade in a fine flush of fury.

Alas ... poor Jayjay.

Actually, Jayjay Kelvin can't be blamed for his attitude. All he was saying was that it was highly improbable that a spaceship would be hit by a meteor. In one way, he was perfectly right, and, in another, he was dead wrong.

How small must a piece of matter be before it is no longer a meteor?

Fortunately, the big hunks rarely travel at more than about two times ten to the sixth centimeters per second, relative to Sol, in the Solar System. But there are little meteors--very tiny ones--that come in, hell-bent-for-leather, at a shade less than the velocity of light. They're called cosmic rays, but they're not radiation in the strict sense of the word. A stripped hydrogen atom, weighing on the order of three point three times ten to the minus twenty-second grams, rest mass, can come galumping along at a velocity so close to that of light that the kinetic energy is something colossal for so small a particle. Protons with a kinetic energy of ten to the nineteenth electron volts, while statistically rare, are not unusual.

Now, ten million million million electron volts may be a wee bit meaningless to the average man, so let's look at it from another angle.

Consider. According to the well-known formula $E = mc^2$, a single gram of matter, if converted completely into energy, would yield some nine hundred million million million ergs of energy. An atomic bomb yields only a fraction of that energy, since only a small percentage of the mass is converted into energy.

If all of the mass of an atomic bomb were converted into energy, the test in Alamogordo, New Mexico, 'way back in 1945, would probably have been the last such test on Earth; there wouldn't have been anyone around to make a second test.

So what does this have to do with cosmic ray particle? Well, if that atomic bomb had been moving at the velocity with which our ten-to-the-nineteenth-electron-volts proton is moving, it could have been made of sand instead of $^{235}$U. It would have produced ten thousand million times as much energy as the total disintegration of the rest mass would have produced!

Kinetic energy, my children, has a great deal more potential than atomic energy.

But we digress.

What has all this to do with Jayjay Kelvin?

If Jayjay had been a detective story addict instead of a Western story addict, he would have heard of the HIBK or "Had I But Known" school of detective writing. You know: "Had I But Known that, at that moment, in the dismal depths of a secret underground meeting place, the evil Chuman-Fu was plotting...."

If Jayjay Kelvin had known what was going on a few million miles away from the Pluto-bound Persephone, he would have kept his mouth shut.
The cargo-ship Mordred was carrying a cargo of heavy metals sunward. In her hold were tightly-packed ingots of osmium-iridium-platinum alloy, gold-copper-silver-mercury alloy, and small percentages of other of the heavy metals. The cargo was to be taken to the Asteroid Belt for purification and then shipped Earthward for final disposition. The fact that silver had replaced copper for electrical purposes on Earth was due to the heavy-metals industry on Pluto. Because of Pluto, the American silver bloc had been broken at last.

The Mordred was approaching turnover.

Now, with a gravito-inertial drive, there is really no need to turn a ship over end-for-end as she approaches the mid-point of her trajectory. Since there is no rocket jet to worry about, all that is really necessary is to put the engine in reverse. In fact, the patrol ships of the Interplanetary Police do just that.

But the IP has been trained to take up to five standard gees in an end-to-end flip, and the ships are built to take the stress in both directions. An ordinary cargo ship finds it a lot easier to simply flip the ship over; that way, the stresses remain the same, and the ceiling-floor relationship is constant.

The Mordred had been having a little trouble with her Number Three drive engine, so the drive was cut off at turnover, while the engineer replaced a worn bearing. At the same time, the maintenance officer decided he'd take a look at the meteor-bumper--the plastic outer hull. Since the ship was in free fall, all he had to do was pull himself along one of the beams that supported the meteor-bumper away from the main hull. The end of one of the beams had cracked a part of the bumper hull--fatigue from stress, nothing more, but the hull might as well be patched while the drive was off.

It was a one-man job; the plastic was dense, but under null-gee conditions it was easy to maneuver. The maintenance officer repaired the slight crack easily, wiped the sticky pre-polymer from the fingers of his spacesuit gloves, and tossed the gooey rag off into space. Then he pushed himself back across the vacuum that separated the outer hull from the inner, entered the air lock, and reported that the job was finished. Five minutes later, the Mordred began decelerating toward the distant Asteroid Belt.

Forget the Mordred. The ship is no longer important. Keep your eyes on that rag. It's a flimsy thing, composed of absorbent plastic and gooed up with a little unpolymerized resin, weighing about fifty grams. It is apparently floating harmlessly in space, just beyond the orbit of Uranus, looking as innocuous as a rag can look. But it is moving sunward at eight hundred million centimeters per second.

The Persephone was approaching turnover. The ship's engineer reported that the engines were humming along smoothly, so there was no need to shut them off; the ship would simply flip over as she ran, making her path a slightly skewed, elongated S-curve--a sort of orbital hiccup.

Except that she never quite made it through the hiccup. The ship was almost perpendicular to her line of flight when she was sideswiped.

Her meteor detectors hadn't failed; they were still functioning perfectly. But meteor detectors are built to look for solid chunks of metal and rock--not thin, porous bits of cloth.

The rag had traveled a good many millions of miles since it had been cast overboard; it was moving sunward with almost the same velocity with which the Persephone was moving Plutowards. The combined velocities were such that, if it had hit the Persephone dead on, it would have delivered close to seventeen thousand kilowatt-hours of energy in one grand burst of incandescence.

Fortunately, the tip of the rag merely gave the ship a slap on the tail as it passed. The plastic became an expanding cloud of furiously incandescent gas in a small fraction of a second, but the velocity of that bit of rag was so great that the gas acted as a solid block of superheated fury as it leaped across the hundred feet of vacuum which separated the bumper hull from the inner hull.

A rocket-driven missile carrying a shaped-charge warhead weighing several hundred pounds might have done almost as much damage.

Jayjay Kelvin moved his arms to pick himself up off the floor and found that there was no necessity for doing so. He was floating in the air of the lounge, and, strictly speaking, there was no floor anyway. He opened his eyes and saw that that which had been the floor was now just another wall, except that it had chairs bolted to it. It rose on his left, reached the zenith, and set on his right, to be replaced by another wall, and then by what had been the ceiling. The second time the floor came round, Jayjay began to wonder whether he was spinning around his longitudinal axis or whether the ship was actually rotating about him. He closed his eyes again.

He didn't feel more than a little dizzy, but he couldn't be sure whether the dizziness was caused by his spinning or the blow on his head. He opened his eyes again and grabbed at the book that was orbiting nearby, then hurled it as hard as he could toward the sometime ceiling. "The Pride of the Pecos" zoomed rapidly in one direction while Jayjay
moved sedately in the other.

The ship was spinning slightly, all right. When he finally grabbed a chair, he found that there was enough spin to give him a weight of an ounce or two. He sat down as best he could and took a good look around.

Aside from "The Pride of the Pecos" and a couple of other books, the air was remarkably free from clutter. There hadn't been much loose stuff laying around. A pencil, a few sheets of paper--nothing more.

There was one object missing. Jayjay looked around more carefully, and this time he saw a hand protruding from the space "beneath" the low table. He bent down for a better look and saw that Jeffry Hull was unconscious. Blood from his nose was spreading slowly over his face, and one eye looked rather battered. Jayjay grasped the protruding wrist and felt for a pulse. It was pumping nicely. He decided that Hull was in no immediate danger; very few people die of a bloody nose.

The lighting in the lounge was none too good; the low-power emergency system had come on automatically when the power from the ship's engines had died. Jayjay wondered just what had happened. There had been a hell of an explosion; that was all he knew.

He wondered if anyone else aboard was alive and conscious, and decided he might as well find out. He took a long dive toward the central stairwell that ran the length of the ship's long axis and looked down. The emergency door to the cargo hold was closed. No air, most likely. The way up looked clear, so he scrambled up the spiral stairway.

A few feet farther up, he found that he had passed the center of the ship's rotation. The Persephone was evidently toppling end-over-end, and the center of rotation was in the lounge itself. The heavy cargo in the hold was balancing the lighter, but longer, part of the ship above the lounge. He began climbing down the stairwell toward the navigation and control sections.

Somewhere down there, somebody was cursing fluently in Arabic.

"Illegitimate offspring of a mangy she-camel! Eater of dogs! Wallower in carrion!" And then, with hardly a break: "Allah, All-Merciful, All-Compassionate! Have mercy on Thy servant! I swear by the beard of Thy holy Prophet that I will attend more closely to my duties to Thee if Thou wilt get me loose from this ill-begotten monstrosity! Help me or I perish!" The last words were a wail.

"I'm coming!" boomed Jayjay in the same tongue. "Save thy strength!"

* * * * *

There was silence from the control room as Jayjay clambered on down the stairwell. Fortunately, the steps had been built so that it was possible to use them from either side, no matter which way the gravity pull happened to be.

By the time he reached the control room, he weighed a good fifteen pounds.

Captain Atef al-Amin was staring up at the stairs as Jayjay came down. He was jammed tightly into a space between two of the big control cabinets, hanging head downward and looking more disheveled than Jayjay had ever seen the usually immaculately-uniformed captain.

"Oh," said Captain Al-Amin, in English, "it's you. For a moment I thought--" Then he waved his free hand.

"Never mind. Can you get me out of here?"

What had been the floor of the control room was now the ceiling. The two steel cabinets which housed parts of the computer unit now appeared to be bolted to the ceiling. They were only about five feet high, and the space between them was far too narrow for a man to have got in there by himself--especially a man of the captain's build. None the less, he was in there--jammed in up to his waist. Only his upper torso and one arm was free. The other arm was jammed in against the wall.

Jayjay took the leap from the stairs and grabbed on to the chair that hung from the ceiling nearby. When you only weigh fifteen pounds, you can make Tarzan look like an amateur.

"You hurt?" he asked.

"It isn't comfortable, sure as hell," said Al-Amin. "I think my arm's broken. Think you can get me loose?"

"I can try. Give me your hand." Jayjay took the captain's free hand and gave it a tug. Then he released the chair he was holding, braced both feet against the panels of the computer housings, and gave a good pull. The captain didn't budge, but he winced a little.

"That hurt?"

"Just my arm. The pressure has cut off my blood circulation; my legs are numb, and I can't tell if they hurt or not."

Jayjay grabbed the chair again and surveyed the situation. "Where's your First Officer?"

"Breckner? Down in the engine room."

Jayjay didn't comment on that. If the hold was airless, it was likely that the engine room was, too, and there was no need to worry Al-Amin any more than necessary just now.

"Can you use a cutting torch?" the captain asked.
"Yes, but I don't think it'll be necessary," Jayjay said. "Hold on a minute." He went back up the stairs to the officers' washroom and, after a little search, got a container of liquid soap from the supplies. Then he went back down to the control room. He made the jump to the chair, holding on with one hand while he held the container of soap with the other.

"Can you hold me up with one hand? I'll need both hands to work with."

"In this gravity? Easy. Give me your belt."

Captain Atef Al-Amin grabbed Jayjay's belt and hung on, while Jayjay used both hands to squirt the liquid soap all over the captain from the waist down.

It would have made a great newspaper photo. Captain Al-Amin, wedged between two steel cabinets, hanging upside-down under a pull of one-fifteenth standard gee, holding up his rescuer by the belt. The rescuer, right-side-up, was squeezing a plastic container of liquid soap and directing the stream against the captain.

When Al-Amin was thoroughly wetted with the solution, Jayjay again braced his feet against the steel panels and pulled.

With a slick, slurping sound, the captain slid loose, and the two of them toppled head-over-heels across the room. Jayjay was prepared for that; he stopped them both by grasping an overhead desk-top as they went by. Then he let go, and the two men dropped slowly to what had been the ceiling.

"Hoo!" said the captain. "That's a relief! Allah!"

Jayjay took a look at the man's arm. "Radius might be broken; ulna seems O.K. We'll splint it later. Your legs are going to tingle like crazy when the feeling comes back."

"I know. But we have other things to worry about, Mr. Kelvin. Evidently you and I are the only ones awake so far, and I'm in no condition to go moving all over this spinning bucket just yet. Would you do some reconnoitering for me?"

"Sure," said Jayjay. "Just tell me what you want."

* * * * *

Within half an hour, the news was in.

There were five men alive in the ship: Jayjay, Captain Al-Amin, Jeffry Hull, Second Officer Vandenbosch, and Maintenance Officer Smith. Vandenbosch had broken both legs and had to be strapped into a bunk and given a shot of narcolene.

Jayjay had put on a spacesuit and taken a look outside. The whole rear end of the ship was gone, and with it had gone the First Officer, the Radio Officer, and the Engineering Officer. And, of course, the main power plant of the ship.

Most of the cargo hold was intact, but the walls had been breached, and the air was gone.

"Well, that's that," said Captain Al-Amin. Jayjay, Smith, Hull, and the captain were in the control room, trying not to look glum. "I wish I knew what happened."

"Meteor," Jayjay said flatly. "The bumper hull is fused at the edges of the break, and the direction of motion was inward."

"I don't see how it could have got by the meteor detectors," said Smith, a lean, sad-looking man with a badly bruised face.

"I don't either," the captain said, "but it must have. If the engines had blown, the damage would have been quite different."

Jeffry Hull nervously took a cigarette from his pocket pack. His nose had quit bleeding, but his eye was purpling rapidly and was almost swollen shut.

Captain Al-Amin leaned over and gently took the cigarette from Hull's fingers. "No smoking, I'm afraid. We'll have to conserve oxygen."

"You guys are so damn calm!" Hull said. His voice betrayed a surface of anger covering a substratum of fear. "Here we are, heading away from the Solar System at eighteen million miles an hour, and you all act as if we were going on a picnic or something."

The observation was hardly accurate. Any group of men who went on a picnic in the frame of mind that Jayjay and the others were in would have produced the gloomiest outing since the Noah family took a trip in an excursion boat.

"There's nothing to worry about," Captain Al-Amin said gently. "All we have to do is set the screamers going, and the Interplanetary Police will pick us up."

"Screamers?" Hull looked puzzled.

Instead of answering the implied question, the captain looked at Smith. "Have you checked them?" He knew that Smith had, but he was trying to quiet Hull's fears.

Smith nodded. "They're O.K." He looked at Hull. "A screamer is an emergency radio. There's one in every
compartment. You've seen them." He pointed across the room, toward a red panel in the wall. "In there."

"But I thought it was impossible for a spaceship in flight to contact a planet by radio," Hull objected.

"Normally, it is," Smith admitted. "It takes too much power and too tight a beam to get much intelligence over a distance that great from a moving ship. But the screamers are set up for emergency purposes. They're like flares, except that they operate on microwave frequencies instead of visible light.

"The big radio telescopes on Luna and on the Jovian satellites can pick them up if we beam them sunward, and the Plutonian station can pick us up if we beam in that direction."

Hull looked much calmer. "But where do you get the power if the engines are gone? Surely the emergency batteries won't supply that kind of power."

"Of course not. Each screamer has its own power supply. It's a hydrogen-oxygen fuel cell that generates a hell of a burst of power for about thirty minutes before it burns out from the overload. It's meant to be used only once, but it does the job."

"How do they know where to find us from a burst like that?" Hull asked.

"Well, suppose we only had one screamer. We'd beam it toward Pluto, since it would be easier for an IP ship to get to us from there. Since all screamers have the same frequency--don't ask me what it is; I'm not a radio man--the velocity of our ship will be indicated by the Doppler Effect. That is, our motion toward or away from them can be calculated that way. Our angular velocity with respect to them can be checked while the screamer is going; they will know which direction we're moving, if we're moving at an angle.

"With that information, all they have to do is find out which ship is in that general area of the sky, which they can find out by checking the schedule, and they can estimate approximately where we'll be. The IP ship will come out, and when they get in the general vicinity, they can find us with their meteor detectors. Nothing to it."

"And," Captain Al-Amin added, "since we have eight screamers still left with us, we have plenty of reserves to call upon. There's nothing to worry about, Mr. Hull."

"But how can you aim a beam when we're toppling end-over-end like this?" Hull asked.

"Well, if we couldn't stop the rotation," said the captain, "we'd broadcast instead of beaming. Anywhere within the Solar System, a screamer can broadcast enough energy to overcome the background noise."

"The IP would have a harder time finding us, of course, but we'd be saved eventually."

"I see," said Hull "How do we go about stopping the rotation?"

"That's the next thing on the agenda," Al-Amin said. "This seasick roll is caused by the unevenness of the load, and I'm pretty sick of it, myself. Smith, will you and Mr. Kelvin get out the emergency rockets? We'll see what we can do to stabilize our platform."

* * * * *

It took better than an hour to get the ship straightened out. For the main job, emergency rockets were set off at the appropriate spots around the hull to counteract the rotation. The final trimming was done with carbon dioxide fire extinguishers, which Smith and Jayjay Kelvin used as jets.

Getting a fix on Pluto was easy enough; the lighthouse station at Styx broadcast a strong beep sunward every ten seconds. They could also pick up the radio lighthouses on Eros, Ceres, Luna, and Mimas. Evidently, the one on Titan was behind the Jovian bulk.

They were ready to send their distress call.

"It's simple," Smith said as he opened the red panel in the wall of the control room. "First we turn on the receiver." He pushed a button marked R. "Then we turn these two wheels here until the pip on that little screen is centered. That's the signal from Pluto. It comes in strong every ten seconds, see?"

Jayjay watched with interest. He'd heard about screamers and had seen them, but he'd never had the opportunity of observing one in action.

Like flares or bombs, they were intended for one-time use. The instructions were printed plainly on the inside of the red door, and Smith was simply reading off what was printed there.

"These wheels," he was saying, "line up the parabolic reflector with the Pluto signal, you see. There. Now we've got it centered. Now, all we have to do is make one small correction and we're all set. These things are built so that they're fool-proof; a kid could operate it. Watch."

Facing each other across a small gap were a pair of tapered screw plugs, one male and one female. The male was an average of half an inch in diameter; the female was larger and bored to fit the male.

"The female plug," Smith said, "leads to two tanks of high-pressure gas inside this cabinet on the left. One tank of oxygen, one of hydrogen. See how this male plug telescopes out to fit into the female? All we have to do is thread them together, and everything is automatic."

Jayjay was aware that Smith's explanations were meant to give Jeffry Hull something to think about instead of his fears. Hull was basically an Earth-hugger, and free fall did nothing to keep him calm. Evidently his subconscious
knew that he had to latch on to something to keep his mental equilibrium, because he showed a tremendous amount of interest in what should have been a routine operation.

"How do you mean, it's all automatic?" he asked. "What happens?"

"Well, you can't see into the female plug, but look here at the male. See those concentric tubes leading into the interior of the cabinet on the right? The outer one leads in the oxygen, the inner leads in the hydrogen. We need twice as much hydrogen as oxygen, so the inner tube has twice the volume delivery as the outer. See?"

"Yes. But what is the solid silver bar in the center of the inner tube?"

"That's the electrical connection for the starter battery. There's a small, short-lived chemical battery, like the ones in an ordinary pocket radio, except that they're built to deliver a high-voltage, high-amperage current for about a tenth of a second. That activates the H-O cell, you see. Also, that silver stud depresses the corresponding stud in the female plug, which turns on the gas flow before it makes the connection with the starter battery. Follow?"

Hull didn't look as though he did, but he nodded gamely. "Then what happens?"

"Then the hydrogen and the oxygen come together in the fuel cell and, instead of generating heat, they generate electric current. That current is fed into the radio unit, and the signal is sent to Pluto. Real simple."

"I see," Hull said. "Well ... go ahead."

Smith telescoped the two leads together and began turning the collar on the female plug.

He screwed it up as far as it would go.

And nothing happened.

"What the hell?" asked Smith of no one in particular. He tried to twist it a little harder. Nothing happened. The threads had gone as far as they would go.

"What's the matter?" Jayjay asked.

"Damfino. No connection. Nothing's happening. And it's as tight as it will go."

"Are the gases flowing?" Jayjay asked.

"I don't know. These things aren't equipped with meters. They're supposed to work automatically."

Jayjay pushed Smith aside. "Let me take a look."

Smith frowned as though he resented an ordinary passenger shoving him around, but Jayjay ignored him. He cocked his head to one side and looked at the connection. "Hm-m-m. He touched it with a finger. Then he wet the finger with his tongue and touched the connection again. "There's no gas flow, Smith."

"How do you know?" Smith was still frowning.

"There's a gap there. That tapered thread isn't in tight. If there were any gas flowing, it would be leaking out."

Before Smith could say anything Jayjay began unscrewing the coupling. When it came apart, it looked just the same as it had before Smith had put it together.

In the dim glow from the emergency lights, it was difficult to see anything.

"Got an electric torch?" Jayjay asked.

Smith pushed himself away from the screamer panel and came back after a moment with a flashlight. "Let me take a look," he said, edging Jayjay aside. He looked over the halves of the coupling very carefully, then said: "I don't see anything wrong. I'll try it again."

"Hold on a second," Jayjay said quietly. "Let me take a look, will you?"

Smith handed him the torch. "Go ahead, but there's nothing wrong."

Jayjay took the light and looked the connections over again. Then he screwed his head around so that he could look into the female plug.

"Hm-m-m. Hard to count. Gap's too small. Anybody got a toothpick?"

Nobody did.

Jayjay turned to Jeffry Hull. "Mr. Hull, would you mind going to the lounge? I think there's some toothpicks in the snack refrigerator."


He pushed himself across the control room and disappeared through the stairwell.

"Get several of them," Jayjay called after him.

Captain Al-Amin said: "What's the trouble, Mr. Kelvin?"

"I'm not sure yet," Jayjay answered. "When did you last have the screamer units inspected?"

"Just before we took off from Jove Station," Al-Amin said. "That's the law. All emergency equipment has to be checked before takeoff. Why? What's the matter?"

"Did they check this unit?" Jayjay asked doggedly.

"Certainly. I watched them check it myself. I--" He brought himself up short and said: "Give me that torch, will you? I want to take a look at the thing."
Jayjay handed him the flashlight and grasped the captain's belt. With one arm in a splint, Al-Amin couldn't hold the flashlight and hold on to anything solid at the same time.

"I don't see anything wrong," he said after a minute.
"Neither do I," Jayjay admitted. "But the way it acts--"
"I got the toothpicks!" Jeffry Hull propelled himself across the room toward the three men who were clustered around the screamer.

Jayjay took the toothpicks, selected one, and inserted it into the female plug. "Hard to see those threads with all the tubes blocking that plug," he said offhandedly.

Hull said: "Captain, did you know that the refrigerator is off?"
"Yes," said Atef Al-Amin absently. "It isn't connected to the emergency circuits. Wastes too much energy. What do you find, Mr. Kelvin?"

After a second's silence, Jayjay said: "Let me check once more." He was running the tip of the toothpick across the threads in the female plug, counting as he did so. "Uh-huh," he said finally, "just as I thought. There's one less thread in the female plug. The male plug is stopped before it can make contact. There's a gap of about a tenth of an inch when the coupling is screwed up tight."

"Let me see," Smith said. He took the toothpick and went through the same operation. "You're right," he said ruefully, "the female plug is faulty. We'll have to use one of the other screamers."

"Right," said Jayjay.

Wrong, said Fate. Or the Powers That Be, or the Fallibility of Man, whatever you want to call it.

Every screamer unit suffered from the same defect.

*I don't understand it!* A pause. "It's impossible! Those units were tested!"

For the first time in his life, Captain Atef Abdullah Al-Amin allowed his voice to betray him.

Arabic is normally spoken about half an octave above the normal tone used for English. And, unlike American English, it tends to waver up and down the scale. Usually, the captain spoke English in the flat, un-accented tones of the Midwest American accent, and spoke Arabic in the ululating tones of the Egyptian.

But now he was speaking English with an Egyptian waver, not realizing that he was doing it.

"How could it happen? It's ridiculous!"

The captain, his maintenance officer, and Jeffry Hull were clustered around the screamer unit in the lounge. Off to one side, Jayjay Kelvin held a deck of cards in his hands and played a game of patience called "transportation solitaire." His eyes didn't miss a play, just as his ears didn't miss a word.

He pulled an ace from the back of the deck and flipped it to the front.

"You said the screamers had been checked," Jeffry Hull said accusingly. "How come they weren't checked?"

"They were!" Al-Amin said sharply.

"Sure they were," Smith added. "I watched the check-off. There was nothing wrong then."

"Meanwhile," Hull said, the acid bite of fear in his voice, "we have to sit here and wait for the Interplanetary Police to find us by pure luck."

The captain should have let Hull cling to the idea that the IP could find the Persephone, even if no signal was sent. But the captain was almost as angry and flustered as Hull was.

"Find us?" he snapped. "Don't be ridiculous! We won't even be missed until we're due at Styx, on Pluto, nine days from now. By that time, we'll be close to two billion miles beyond the orbit of Pluto. We'll never be found if we wait 'til then. Something has to be done now!" He looked at his Maintenance Officer. "Smith, isn't there some way to make contact between those two plugs?"

"Sure," Smith said bitterly. "If we had the tools, it would be duck soup. All we'd have to do is trim down the male plug to fit the female, and we'd have it. But we don't have the tools. We've got a couple of files and a quarter-horsepower electric drill with one bit. Everything else was in the tool compartment--which is long gone, with the engine room."

"Can't you ... uh, what do you call it? Uh ... jury-something--" Hull's voice sounded as though he were forcing it to be calm.

"Jury-rig?" Smith said. "Yeah? With what? Dammit, we haven't got any tools, and we haven't got any materials to work with!"

"Can't you just use a wrench to tighten them more?" Hull asked helplessly.

Smith said a dirty word and pushed himself away from the screamer unit to glower at an unresisting wall.

"No, Mr. Hull, we couldn't," said Captain Al-Amin with restrained patience. "That would strip the threads. If the electrical contact were made at the same time, the high-pressure oxygen-hydrogen flow would spark off, and we'd get a big explosion that would wreck everything--including us." Then he muttered to himself: "I still don't see
how it could happen."
Jayjay Kelvin pulled a nine of spades from the back of the deck to the front. It matched the four of spades that had come three cards before. Jayjay discarded the two cards between the spades. "You don't?" he asked. "Didn't you ever hear that the total is greater than the sum of its parts?"
"What?" Captain Al-Amin sounded as though he'd been insulted--in Arabic. "What are you talking about, Mr. Kelvin?"
"I'm talking about the idiocy of the checking system," Jayjay said flatly. "Don't you see what they did? Don't you see what happened? Each part of a screamer has to be checked separately, right?"
Al-Amin nodded.
"Why? Because the things burn out if you check them as a complete unit. It's like checking a .50 caliber cartridge. The only way you can check a cartridge is to shoot it in a gun. If it works, then you know it works. Period. The only trouble is that you've wasted the cartridge. You know that that one is good, but you've ruined it.
"Same way with a screamer. If you test it as a unit, you'll ruin it. So you test it a part at a time. All the parts check out nicely because the test mechanisms are built to check each part."
Smith squinted. "Well, sure. If you check out the whole screamer, you'll ruin it. So what?"
"So suppose you were going to check out a cartridge," Jayjay said. "You don't fire it; you check each part separately. You check the brass case. It's all right; the tests show that it won't burst under firing pressure. You check the primer; the tests show that it will explode when hit by the gun's hammer. You check the powder; the tests show that the powder will burn nicely when the flame from the primer hits it. You check the bullet; the tests show that the slug will be expelled at the proper velocity when the powder is ignited.
"So you assume that the cartridge will function when fired.
"But will it?"
"Why wouldn't it?" Smith asked.
"Because the flame from the exploding primer can't reach the powder, that's why!" Jayjay snapped. "Some jerk has redesigned the primer so that the flame misses the propellant!"
"How could that happen?" Hull asked blankly.
"How? Because Designer A decided that the male plug on the screamer should have one more turn on its threads, but he forgot to tell Designer B, who designs the female plug, that the two should match. The testing equipment is designed to test each part, so each part tests out fine. The only trouble is that the thing doesn't test out as a whole."
* * * * *
Captain Al-Amin nodded slowly. "That's right. The test showed that the oxyhydrogen section worked fine. It showed that the starter worked fine. It showed that the radiowave broadcaster worked fine. But it didn't show that they'd work together."
Smith said a short, five-letter word. It was French; the Anglo-Saxon equivalent has only four letters. "What good does all this theorizing do us?" he added. "The question is: How do we fix the thing?"
"Well, can't you put another turn on the thread?" Hull asked blankly.
"Oh, sure," Smith said sarcastically. "You give me a lathe and the proper tools, and I'll make you all the connections you want. Hell, if I had the proper tools, I could turn us out a new spaceship, and we could all go home in comfort."
"Couldn't you drill out the metal with that drill?" Hull asked plaintively.
"No!" Smith said harshly. "How do you expect me to get a quarter-inch bit into a space less than a sixteenth of an inch in diameter?"
Hull wasn't used to machinist's terms. "How big is an inch?"
"Two point five four oh oh five centimeters," Smith said in a nasty tone of voice. "Does that help you any?"
"I'm just trying to help!" Hull snapped. "You've got no call to get sarcastic with me!"
Smith said the French word again.
"Enough!" the captain barked. "Smith, control your tongue! That sort of thing won't help us." He jerked his head around. "Mr. Kelvin, do you have any suggestions?"
Jayjay played another card. "No. Not yet. I'm thinking."
"Smith? Any ideas?" The tone of the Arab's voice left no doubt that he meant business.
"No, sir. Without a properly equipped machine shop, there's nothing we can do."
"How so?"
"Because that's a precision job, sir. The threads are tapered so that the fit will be gas-tight. That's why the threads have a ten-thousandth of an inch of soft polyethylene covering the hard steel, so that when the threads are tight, the polyethylene will act as a seal. Everything in that connection is a precision fitted job. The ends of the tubes
are made to be slightly mashed together, so that the seals will be tight—they're coated with polyethylene, too. If the oxygen and hydrogen mix, the efficiency of the fuel cell goes down to zero, and you run the chance of an explosion."

"Show me," Al-Amin said.

Smith took a pencil out of his pocket and began drawing a cross section of the connection on the top of the nearby table.

"Look here, captain, this is the way the two are supposed to fit. But they don't, because the male plug can't get far enough into the female socket to make the connection. Like this, see?"

The captain nodded.

"Well," Smith continued, "there's a thirty-second of an inch clearance there. If the female had one more turn of thread, the fit would be prefect. As it is, we get no connection. So the screamer doesn't function."

Al-Amin looked at the drawing. "Odd that there's never been any complaint about this error before."

Jayjay turned another ace. "Not so odd, really."

All heads turned toward Jayjay.

"What does that mean?" Smith asked.

"Just what I said." Jayjay turned another card. "A screamer is supposed to call for help, isn't it? It's only used in a dire emergency. Then the only test of the whole unit comes when the occupants of the spaceship are in danger—as we are. If the things don't work, how could there be any complaint? If we can't get ours to work, will we complain? To whom?"

"How many ships have been reported missing in the past year or so? All of them presumed lost because of meteor strikes, eh? If a ship is lost and doesn't signal, we presume that it was totally destroyed. If it wasn't, they'd have signaled. As Mister Smith says: See?"

There was a long silence.

Jayjay Kelvin turned the last card, saw that he had lost, and began shuffling the deck.

*I think I've got it," Smith said excitedly, several hours later.

Captain Al-Amin glanced around. Hull was dozing fitfully a few inches above the couch. Jayjay Kelvin was still methodically playing solitaire.

"Keep your voice down," the captain ordered. "No use giving our passengers false hopes. What do you mean, you've got it?"

"Simple. Real simple. All we have to do is file off the last thread of the male plug. Then it will fit into the female." Smith's voice was a hoarse whisper.

"Won't work," said Jayjay Kelvin from across the room.

Smith blew up. "How do you know?" he roared. "You sit over there making wiseacre remarks and do nothing! Play cards, that's all! What do you know about things like this, Mister Joseph Kelvin? What does a businessman know about mechanical equipment?"

"Enough," Jayjay said quietly. "Enough to know that, if you try to file off the final thread of the male plug, you'll do an uneven job. And that will mean leakage."

"What do you mean, an uneven job?" Smith was still furious.

"Trimming off the end of the male plug would have to be done on a lathe," Jayjay said, without looking up from his cards. "Otherwise, the fit would be wrong, and the gases would mix. And we would all go phfft! when the mixture blew."

Smith started to say something, but Jayjay went right on talking. "Even if we had a lathe, the male plug doesn't turn, so you'd be out of luck all the way. You can't take the screamers apart without wrecking them—not without a machine shop. You're going to have to work on that female connection. She's got a sleeve on her that will turn. Now, if—" Jayjay's voice faded off into silence, and his manipulations of the cards became purely mechanical.

"Huh!" Smith said softly. "Just because he's related to Kelvin Associates, he thinks he's hot—" He said the French word again.

"Is he right?" Captain Al-Amin asked sharply.

"Well—" Smith rubbed his nose with a forefinger. "Well, yes. I was wrong. We can't do it with a file. It would have to be turned on a lathe, and we don't have a lathe. And we don't have any measuring instruments, either. This is a precision job, as I said. And we don't have a common ruler aboard, much less a micrometer. Any makeshift job will be a failure."

Captain Al-Amin brooded over that for a moment. Then he looked at Jayjay again. "Mr. Kelvin."

"Yes, captain?" Jayjay didn't look up from the cards in his hands.

"Are you related to Kelvin Associates?"
"In a way."

Al-Amin bit at his lower lip. "Mr. Kelvin, you registered aboard this ship as Joseph Kelvin. May I ask if your middle name is James?"

After a short pause, Jayjay said: "Yes. It is."

"Are you the J. J. Kelvin?"

"Yup. But I'd rather you didn't mention it when we get to Pluto."

Smith's jaw had slowly sagged during that conversation. Then he closed his mouth with a snap. "You're Jayjay Kelvin?" he asked, opening his mouth again.

"That's right."

"Then I apologize."

"Accepted," said Jayjay. He wished that Smith hadn't apologized.

"Why didn't you say so in the first place?" Captain Al-Amin asked.

"Because I didn't want it known that I was going to Pluto," Kelvin said. "And--after the accident happened--I kept quiet because I know human nature."

Jeffry Hull, who had awakened during the argument, looked at Jayjay and said: "What's human nature got to do with it, Mr. Kelvin?"

"Nothing, except that if I'd told everyone I was J. J. Kelvin, all of you would have been sitting around waiting for me to solve the problem instead of thinking about it yourselves."

Hull nodded thoughtfully. "It makes sense, Mr. Kelvin. If they'd known that you were ... well ... Mister Spaceship Himself, they'd have let you do all the thinking. And that would have left you high and dry, wouldn't it?"

Jayjay put the deck of cards in his pocket. "You're a pretty good sociologist, after all, Mr. Hull. You're right. Face any group with Authority--with a capital A--and they quit thinking for themselves. And if they do, then the poor slob of an Authority doesn't have anything to tickle his own brains, so everybody loses."

"Well, do you have an answer?" Captain Al-Amin asked.

Jayjay shook his head. "Not yet. I think I've got one coming up, but I wish you two would go on talking while I think."

"I'll try," Smith said wryly.

* * * * *

The problem was both simple and complex. The female socket lacked one single turn of thread to make a perfect connection. A few hundredths of an inch separated success from disaster.

Five men, including the unconscious Vandenbosch, were only a fraction of an inch away from death.

Jayjay Kelvin listened to Smith talk for another half hour, throwing in objections when necessary, but offering no opinions.

"All we have to do," Smith said at last, "is get rid of that little bit of metal beyond the thread in the female socket. But there's no way to get it out. We can't use a chisel because the force would warp the threads. Besides, we couldn't get a chisel in there."

"And we don't have a chisel," Captain Al-Amin added. "We don't have any tools at all."

"Except," said Jayjay, "an electric hand drill and a quarter-inch bit."

"Well, sure," said Smith. "But what good will that do us?"

"If we rigged a belt between the drill's motor and the sleeve of the female socket, the sleeve would rotate as if it were on a lathe, wouldn't it?"

Smith blinked. "Sure. Yeah! Hey!" His face brightened. Then it looked sad again. "But what good would that do us?"

"You said that all we have between us and success is a fraction of an inch of metal. If we can remove that fraction of an inch, we're successful."

"But how can you put a thread into that socket?" Smith asked.

Jayjay beamed as though it were his birthday. "We don't have to put a thread in there. All we have to do is give the thread on the male plug room to move in. All we have to do is clear away that metal. So we'll use the drill motor to turn the sleeve as if it were on a lathe."

Smith still didn't look enthusiastic. "All right. We have a lathe. But what are we going to use for tools? What are we going to cut the metal with?"

"Jayjay's smile became broader. "Carbon steel. What else?"

"Oh?" said Smith. "And where do we get these tools, Mr. Kelvin? From the circumambient ether?"

"Not at all," said Jayjay. "Did you ever chip flint?"

"What?"

"Never mind. All we have to do is use that quarter-inch bit."
Smith still looked confused. “I don't get it. A bit that big won't fit in.”

"We simply crack a piece off that hard carbon steel," Jayjay said. "We can make a lathe tool that will fit into the small space between the inner and outer tubes. The fractured edge will be sharp enough to take out the excess metal. The male plug can move in, and we'll have contact."

"Well, I'll be--" Smith used another French word.

Captain Atef Al-Amin cast his eyes upwards. "Creatio ex nihilo," he said softly.

* * * * *

When the Interplanetary Police ship took the five men and the cargo from the wreck of the Persephone, the major in command of the ship, who knew that he had rescued the great J. J. Kelvin, asked him: "Mr. Kelvin, what do you plan to do when you return to Ceres City?"

And Jayjay, who knew that both he and the major were speaking for the newsfacs and for posterity, said:

"I'm going to make sure that Kelvin Associates learns to make emergency equipment properly. We will never again put faulty equipment aboard a ship."

The major looked perplexed. "What?"

"I'm going to have some designer's head!" said Jayjay Kelvin.

THE END
By Randall Garrett

There are times when a broken tool is better than a sound one, or a twisted personality more useful than a whole one. For instance, a whole beer bottle isn't half the weapon that half a beer bottle is ...

In his office apartment, on the top floor of the Terran Embassy Building in Occeq City, Bertrand Malloy leafed casually through the dossiers of the four new men who had been assigned to him. They were typical of the kind of men who were sent to him, he thought. Which meant, as usual, that they were atypical. Every man in the Diplomatic Corps who developed a twitch or a quirk was shipped to Saarkkad IV to work under Bertrand Malloy, Permanent Terran Ambassador to His Utter Munificence, the Occeq of Saarkkad.

Take this first one, for instance. Malloy ran his finger down the columns of complex symbolism that showed the complete psychological analysis of the man. Psychopathic paranoia. The man wasn't technically insane; he could be as lucid as the next man most of the time. But he was morbidly suspicious that every man's hand was turned against him. He trusted no one, and was perpetually on his guard against imaginary plots and persecutions.

Number two suffered from some sort of emotional block that left him continually on the horns of one dilemma or another. He was psychologically incapable of making a decision if he were faced with two or more possible alternatives of any major importance.

Number three ...

Malloy sighed and pushed the dossiers away from him. No two men were alike, and yet there sometimes seemed to be an eternal sameness about all men. He considered himself an individual, for instance, but wasn't the basic similarity there, after all?

He was--how old? He glanced at the Earth calendar dial that was automatically correlated with the Saarkkadic calendar just above it. Fifty-nine next week. Fifty-nine years old. And what did he have to show for it besides flabby muscles, sagging skin, a wrinkled face, and gray hair?

Well, he had an excellent record in the Corps, if nothing else. One of the top men in his field. And he had his memories of Diane, dead these ten years, but still beautiful and alive in his recollections. And--he grinned softly to himself--he had Saarkkad.

He glanced up at the ceiling, and mentally allowed his gaze to penetrate it to the blue sky beyond it.

Out there was the terrible emptiness of interstellar space--a great, yawning, infinite chasm capable of swallowing men, ships, planets, suns, and whole galaxies without filling its insatiable void.

Malloy closed his eyes. Somewhere out there, a war was raging. He didn't even like to think of that, but it was necessary to keep it in mind. Somewhere out there, the ships of Earth were ranged against the ships of the alien Karna in the most important war that Mankind had yet fought.

And, Malloy knew, his own position was not unimportant in that war. He was not in the battle line, nor even in the major production line, but it was necessary to keep the drug supply lines flowing from Saarkkad, and that meant keeping on good terms with the Saarkkadic government.

The Saarkkada themselves were humanoid in physical form--if one allowed the term to cover a wide range of differences--but their minds just didn't function along the same lines.

For nine years, Bertrand Malloy had been Ambassador to Saarkkad, and for nine years, no Saarkkada had ever seen him. To have shown himself to one of them would have meant instant loss of prestige.

To their way of thinking, an important official was aloof. The greater his importance, the greater must be his isolation. The Occeq of Saarkkad himself was never seen except by a handful of picked nobles, who, themselves, were never seen except by their underlings. It was a long, roundabout way of doing business, but it was the only way Saarkkad would do any business at all. To violate the rigid social setup of Saarkkad would mean the instant closing off of the supply of biochemical products that the Saarkkadic laboratories produced from native plants and animals--products that were vitally necessary to Earth's war, and which could be duplicated nowhere else in the known universe.

It was Bertrand Malloy's job to keep the production output high and to keep the materiel flowing towards Earth and her allies and outposts.

The job would have been a snap cinch in the right circumstances; the Saarkkada weren't difficult to get along with. A staff of top-grade men could have handled them without half trying.

But Malloy didn't have top-grade men. They couldn't be spared from work that required their total capacity. It's
inefficient to waste a man on a job that he can do without half trying where there are more important jobs that will
tax his full output.

So Malloy was stuck with the culls. Not the worst ones, of course; there were places in the galaxy that were less
important than Saarkkad to the war effort. Malloy knew that, no matter what was wrong with a man, as long as he
had the mental ability to dress himself and get himself to work, useful work could be found for him.

Physical handicaps weren't at all difficult to deal with. A blind man can work very well in the total darkness of
an infrared-film darkroom. Partial or total losses of limbs can be compensated for in one way or another.

The mental disabilities were harder to deal with, but not totally impossible. On a world without liquor, a
dipsomaniac could be channeled easily enough; and he'd better not try fermenting his own on Saarkkad unless he
brought his own yeast—which was impossible, in view of the sterilization regulations.

But Malloy didn't like to stop at merely thwarting mental quirks; he liked to find places where they were useful.

* * * * *

The phone chimed. Malloy flipped it on with a practiced hand.

"Malloy here."

"Mr. Malloy?" said a careful voice. "A special communication for you has been teletyped in from Earth. Shall I
bring it in?"

"Bring it in, Miss Drayson."

Miss Drayson was a case in point. She was uncommunicative. She liked to gather in information, but she found
it difficult to give it up once it was in her possession.

Malloy had made her his private secretary. Nothing—but nothing—got out of Malloy's office without his direct
order. It had taken Malloy a long time to get it into Miss Drayson's head that it was perfectly all right—even
desirable—for her to keep secrets from everyone except Malloy.

She came in through the door, a rather handsome woman in her middle thirties, clutching a sheaf of papers in
her right hand as though someone might at any instant snatch it from her before she could turn it over to Malloy.

She laid them carefully on the desk. "If anything else comes in, I'll let you know immediately, sir," she said.

"Will there be anything else?"

Malloy let her stand there while he picked up the communique. She wanted to know what his reaction was
going to be; it didn't matter because no one would ever find out from her what he had done unless she was ordered to
tell someone.

He read the first paragraph, and his eyes widened involuntarily.

"Armistice," he said in a low whisper. "There's a chance that the war may be over."

"Yes, sir," said Miss Drayson in a hushed voice.

Malloy read the whole thing through, fighting to keep his emotions in check. Miss Drayson stood there calmly,
her face a mask; her emotions were a secret.

Finally, Malloy looked up. "I'll let you know as soon as I reach a decision, Miss Drayson. I think I hardly need
say that no news of this is to leave this office."

"Of course not, sir."

Malloy watched her go out the door without actually seeing her. The war was over—at least for a while. He
looked down at the papers again.

The Karna, slowly being beaten back on every front, were suing for peace. They wanted an armistice
conference—immediately.

Earth was willing. Interstellar war is too costly to allow it to continue any longer than necessary, and this one
had been going on for more than thirteen years now. Peace was necessary. But not peace at any price.

The trouble was that the Karna had a reputation for losing wars and winning at the peace table. They were
clever, persuasive talkers. They could twist a disadvantage to an advantage, and make their own strengths look like
weaknesses. If they won the armistice, they'd be able to retrench and rearm, and the war would break out again
within a few years.

Now—at this point in time—they could be beaten. They could be forced to allow supervision of the production
potential, forced to disarm, rendered impotent. But if the armistice went to their own advantage ... 

Already, they had taken the offensive in the matter of the peace talks. They had sent a full delegation to
Saarkkad V, the next planet out from the Saarkkad sun, a chilly world inhabited only by low-intelligence animals.
The Karna considered this to be fully neutral territory, and Earth couldn't argue the point very well. In addition, they
demanded that the conference begin in three days, Terrestrial time.

The trouble was that interstellar communication beams travel a devil of a lot faster than ships. It would take
more than a week for the Earth government to get a vessel to Saarkkad V. Earth had been caught unprepared for an
armistice. They objected.
The Karna pointed out that the Saarkkad sun was just as far from Karn as it was from Earth, that it was only a few million miles from a planet which was allied with Earth, and that it was unfair for Earth to take so much time in preparing for an armistice. Why hadn't Earth been prepared? Did they intend to fight to the utter destruction of Karn?

It wouldn't have been a problem at all if Earth and Karn had fostered the only two intelligent races in the galaxy. The sort of grandstanding the Karna were putting on had to be played to an audience. But there were other intelligent races throughout the galaxy, most of whom had remained as neutral as possible during the Earth-Karn war. They had no intention of sticking their figurative noses into a battle between the two most powerful races in the galaxy.

But whoever won the armistice would find that some of the now-neutral races would come in on their side if war broke out again. If the Karna played their cards right, their side would be strong enough next time to win.

So Earth had to get a delegation to meet with the Karna representatives within the three-day limit or lose what might be a vital point in the negotiations.

And that was where Bertrand Malloy came in.

He had been appointed Minister and Plenipotentiary Extraordinary to the Earth-Karn peace conference.

He looked up at the ceiling again. "What can I do?" he said softly.

* * * * *

On the second day after the arrival of the communique, Malloy made his decision. He flipped on his intercom and said: "Miss Drayson, get hold of James Nordon and Kylen Braynek. I want to see them both immediately. Send Nordon in first, and tell Braynek to wait."

"Yes, sir."

"And keep the recorder on. You can file the tape later."

"Yes, sir."

Malloy knew the woman would listen in on the intercom anyway, and it was better to give her permission to do so.

James Nordon was tall, broad-shouldered, and thirty-eight. His hair was graying at the temples, and his handsome face looked cool and efficient.

Malloy waved him to a seat.

"Nordon, I have a job for you. It's probably one of the most important jobs you'll ever have in your life. It can mean big things for you--promotion and prestige if you do it well."

Nordon nodded slowly. "Yes, sir."

Malloy explained the problem of the Karna peace talks.

"We need a man who can outthink them," Malloy finished, "and judging from your record, I think you're that man. It involves risk, of course. If you make the wrong decisions, your name will be mud back on Earth. But I don't think there's much chance of that, really. Do you want to handle small-time operations all your life? Of course not.

"You'll be leaving within an hour for Saarkkad V."

Nordon nodded again. "Yes, sir; certainly. Am I to go alone?"

"No," said Malloy, "I'm sending an assistant with you--a man named Kylen Braynek. Ever heard of him?"

Nordon shook his head. "Not that I recall, Mr. Malloy. Should I have?"

"Not necessarily. He's a pretty shrewd operator, though. He knows a lot about interstellar law, and he's capable of spotting a trap a mile away. You'll be in charge, of course, but I want you to pay special attention to his advice."

"I will, sir," Nordon said gratefully. "A man like that can be useful."

"Right. Now, you go into the anteroom over there. I've prepared a summary of the situation, and you'll have to study it and get into your head before the ship leaves. That isn't much time, but it's the Karna who are doing the pushing, not us."

As soon as Nordon had left, Malloy said softly: "Send in Braynek, Miss Drayson."

Kylen Braynek was a smallish man with mouse-brown hair that lay flat against his skull, and hard, penetrating, dark eyes that were shadowed by heavy, protruding brows. Malloy asked him to sit down.

Again Malloy went through the explanation of the peace conference.

"Naturally, they'll be trying to trick you every step of the way," Malloy went on. "They're shrewd and underhanded; we'll simply have to be more shrewd and more underhanded. Nordon's job is to sit quietly and evaluate the data; yours will be to find the loopholes they're laying out for themselves and plug them. Don't antagonize them, but don't baby them, either. If you see anything underhanded going on, let Nordon know immediately."

"They won't get anything by me, Mr. Malloy."

* * * * *
By the time the ship from Earth got there, the peace conference had been going on for four days. Bertrand Malloy had full reports on the whole parley, as relayed to him through the ship that had taken Nordon and Braynek to Saarkkad V.

Secretary of State Blendwell stopped off at Saarkkad IV before going on to V to take charge of the conference. He was a tallish, lean man with a few strands of gray hair on the top of his otherwise bald scalp, and he wore a hearty, professional smile that didn't quite make it to his calculating eyes.

He took Malloy's hand and shook it warmly. "How are you, Mr. Ambassador?"

"Fine, Mr. Secretary. How's everything on Earth?"

"Tense. They're waiting to see what is going to happen on Five. So am I, for that matter." His eyes were curious. "You decided not to go yourself, eh?"

"I thought it better not to. I sent a good team, instead. Would you like to see the reports?"

"I certainly would."

Malloy handed them to the secretary, and as he read, Malloy watched him. Blendwell was a political appointee—a good man, Malloy had to admit, but he didn't know all the ins and outs of the Diplomatic Corps.

When Blendwell looked up from the reports at last, he said: "Amazing! They've held off the Karna at every point! They've beaten them back! They've managed to cope with and outdo the finest team of negotiators the Karna could send."

"I thought they would," said Malloy, trying to appear modest.

The secretary's eyes narrowed. "I've heard of the work you've been doing here with ... ah ... sick men. Is this one of your ... ah ... successes?"

Malloy nodded. "I think so. The Karna put us in a dilemma, so I threw a dilemma right back at them."

"How do you mean?"

"Nordon had a mental block against making decisions. If he took a girl out on a date, he'd have trouble making up his mind whether to kiss her or not until she made up his mind for him, one way or the other. He's that kind of guy. Until he's presented with one, single, clear decision which admits of no alternatives, he can't move at all.

"As you can see, the Karna tried to give us several choices on each point, and they were all rigged. Until they backed down to a single point and proved that it wasn't rigged, Nordon couldn't possibly make up his mind. I drummed into him how important this was, and the more importance there is attached to his decisions, the more incapable he becomes of making them."

The Secretary nodded slowly. "What about Braynek?"

"Paranoid," said Malloy. "He thinks everyone is plotting against him. In this case, that's all to the good because the Karna are plotting against him. No matter what they put forth, Braynek is convinced that there's a trap in it somewhere, and he digs to find out what the trap is. Even if there isn't a trap, the Karna can't satisfy Braynek, because he's convinced that there has to be--somewhere. As a result, all his advice to Nordon, and all his questioning on the wildest possibilities, just serves to keep Nordon from getting unconfused."

"These two men are honestly doing their best to win at the peace conference, and they've got the Karna reeling. The Karna can see that we're not trying to stall; our men are actually working at trying to reach a decision. But what the Karna don't see is that those men, as a team, are unbeatable because, in this situation, they're psychologically incapable of losing."

Again the Secretary of State nodded his approval, but there was still a question in his mind. "Since you know all that, couldn't you have handled it yourself?"

"Maybe, but I doubt it. They might have gotten around me someway by sneaking up on a blind spot. Nordon and Braynek have blind spots, but they're covered with armor. No, I'm glad I couldn't go; it's better this way."

The Secretary of State raised an eyebrow. "Couldn't go, Mr. Ambassador?"

Malloy looked at him. "Didn't you know? I wondered why you appointed me, in the first place. No, I couldn't go. The reason why I'm here, cooped up in this office, hiding from the Saarkkada the way a good Saarkkadac bigshot should, is because I like it that way. I suffer from agoraphobia and xenophobia.

"I have to be drugged to be put on a spaceship because I can't take all that empty space, even if I'm protected from it by a steel shell." A look of revulsion came over his face. "And I can't stand aliens!"

THE END
The creatures on the little planet were real bafflers. The first puzzler about them was that they died so easily. The second was that they didn't die at all.

I

Tension eased away as the spaceship settled down on its metallic haunches and they savored a safe planetfall. Ekstrohm fingered loose the cinches of his deceleration couch. He sighed. An exploration camp would mean things would be simpler for him. He could hide his problem from the others more easily. Trying to keep secret what he did alone at night was very difficult under the close conditions on board a ship in space.

Ryan hefted his bulk up and supported it on one elbow. He rubbed his eyes sleepily with one huge paw. "Ekstrohm, Nogol, you guys okay?"

"Nothing wrong with me that couldn't be cured," Nogol said. He didn't say what would cure him; he had been explaining all during the trip what he needed to make him feel like himself. His small black eyes darted inside the olive oval of his face.

"Ekstrohm?" Ryan insisted.

"Okay."

"Well, let's take a ground-level look at the country around here."

The facsiport rolled open on the landscape. A range of bluffs hugged the horizon, the color of decaying moss. Above them, the sky was the black of space, or the almost equal black of the winter sky above Minneapolis, seen against neon-lit snow. That cold, empty sky was full of fire and light. It seemed almost a magnification of the Galaxy itself, of the Milky Way, blown up by some master photographer.

This fiery swath was actually only a belt of minor planets, almost like the asteroid belt in the original Solar System. These planets were much bigger, nearly all capable of holding an atmosphere. But to the infuriation of scientists, for no known reason not all of them did. This would be the fifth mapping expedition to the planetoids of Yancy-6 in three generations. They lay months away from the nearest Earth star by jump drive, and no one knew what they were good for, although it was felt that they would probably be good for something if it could only be discovered--much like the continent of Antarctica in ancient history.

"How can a planet with so many neighbors be so lonely?" Ryan asked. He was the captain, so he could ask questions like that.

"Some can be lonely in a crowd," Nogol said elaborately.

* * * * *

"What will we need outside, Ryan?" Ekstrohm asked.

"No helmets," the captain answered. "We can breathe out there, all right. It just won't be easy. This old world lost all of its helium and trace gases long ago. Nitrogen and oxygen are about it."

"Ryan, look over there," Nogol said. "Animals. Ringing the ship. Think they're intelligent, maybe hostile?"

"I think they're dead," Ekstrohm interjected quietly. "I get no readings from them at all. Sonic, electronic, galvanic--all blank. According to these needles, they're stone dead."

"Ekstrohm, you and I will have a look," Ryan said. "You hold down the fort, Nogol. Take it easy."

"Easy," Nogol confirmed. "I heard a story once about a rookie who got excited when the captain stepped outside and he couldn't get an encephalographic reading on him. Me, I know the mind of an officer works in a strange and unfathomable manner."

"I'm not worried about you mis-reading the dials, Nogol, just about a lug like you reading them at all. Remember, when the little hand is straight up that's negative. Positive results start when it goes towards the hand you use to make your mark."

"But I'm ambidextrous."

Ryan told him what he could do then.

Ekstrohm smiled, and followed the captain through the airlock with only a glance at the lapel gauge on his coverall. The strong negative field his suit set up would help to repel bacteria and insects.

Actually, the types of infection that could attack a warm-blooded mammal were not infinite, and over the course of the last few hundred years adequate defenses had been found for all basic categories. He wasn't likely to come down with hot chills and puzzling striped fever.

They ignored the ladder down to the planet surface and, with only a glance at the seismological gauge to judge surface resistance, dropped to the ground.

It was day, but in the thin atmosphere contrasts were sharp between light and shadow. They walked from midnight to noon, noon to midnight, and came to the beast sprawled on its side.
Ekstrohm nudged it with a boot. "Hey, this is pretty close to a wart-hog."

"Uh-huh," Ryan admitted. "One of the best matches I've ever found. Well, it has to happen. Statistical average
and all. Still, it sometimes gives you a creepy feeling to find a rabbit or a snapping turtle on some strange world. It
makes you wonder if this exploration business isn't all some big joke, and somebody has been everywhere before
you even started."

* * * * *

The surveyor looked sidewise at the captain. The big man seldom gave out with such thoughts. Ekstrohm
cleared his throat. "What shall we do with this one? Dissect it?"

Ryan nudged it with his toe, following Ekstrohm's example. "I don't know, Stormy. It sure as hell doesn't look
like any dominant intelligent species to me. No hands, for one thing. Of course, that's not definite proof."

"No, it isn't," Ekstrohm said.

"I think we'd better let it lay until we get a clearer picture of the ecological setup around here. In the meantime,
we might be thinking on the problem all these dead beasts represent. What killed them?"

"It looks like we did, when we made blastdown."

"But what about our landing was lethal to the creatures?"

"Radiation?" Ekstrohm suggested. "The planet is very low in radiation from mineral deposits, and the
atmosphere seems to shield out most of the solar output. Any little dose of radiation might knock off these critters."

"I don't know about that. Maybe it would work the other way. Maybe because they have had virtually no
radioactive exposure and don't have any R's stored up, they could take a lot without harm."

"Then maybe it was the shockwave we set up. Or maybe it's sheer xenophobia. They curl up and die at the sight
of something strange and alien--like a spaceship."

"Maybe," the captain admitted. "At this stage of the game anything could be possible. But there's one
possibility I particularly don't like."

"And that is?"

"Suppose it was not us that killed these aliens. Suppose it is something right on the planet, native to it. I just
hope it doesn't work on Earthmen too. These critters went real sudden."

* * * * *

Ekstrohm lay in his bunk and thought, the camp is quiet.

The Earthmen made camp outside the spaceship. There was no reason to leave the comfortable quarters inside
the ship, except that, faced with a possibility of sleeping on solid ground, they simply had to get out.

The camp was a cluster of aluminum bubbles, ringed with a spy web to alert the Earthmen to the approach of
any being.

Each man had a bubble to himself, privacy after the long period of enforced intimacy on board the ship.

Ekstrohm lay in his bunk and listened to the sounds of the night on Yancy-6 138. There was a keening of wind,
and a cracking of the frozen ground. Insects there were on the world, but they were frozen solid during the night,
only to revive and thaw in the morning sun.

The bunk he lay on was much more uncomfortable than the acceleration couches on board. Yet he knew the
others were sleeping more soundly, now that they had renewed their contact with the matter that had birthed them to
send them riding high vacuum.

Ekstrohm was not asleep.

Now there could be an end to pretending.

He threw off the light blanket and swung his feet off the bunk, to the floor. Ekstrohm stood up.

There was no longer any need to hide. But what was there to do? What had changed for him?

He no longer had to lie in his bunk all night, his eyes closed, pretending to sleep. In privacy he could walk
around, leave the light on, read.

It was small comfort for insomnia.

Ekstrohm never slept. Some doctors had informed him he was mistaken about this. Actually, they said, he did
sleep, but so shortly and fitfully that he forgot. Others admitted he was absolutely correct—he never slept. His body
processes only slowed down enough for him to dispel fatigue poisons. Occasionally he fell into a waking, gritty-
eyed stupor; but he never slept.

Never at all.

Naturally, he couldn't let his shipmates know this. Insomnia would ground him from the Exploration Service,
on physiological if not psychological grounds. He had to hide it.

* * * * *

Over the years, he had had buddies in space in whom he thought he could confide. The buddies invariably took
advantage of him. Since he couldn't sleep anyway, he might as well stand their watches for them or write their
reports. Where the hell did he get off threatening to report any laxness on their part to the captain? A man with insomnia had better avoid bad dreams of that kind if he knew what was good for him.

Ekstrohm had to hide his secret.

In a camp, instead of shipboard, hiding the secret was easier. But the secret itself was just as hard.

Ekstrohm picked up a lightweight no-back from the ship's library, a book by Bloch, the famous twentieth-century expert on sex. He scanned a few lines on the social repercussions of a celebrated nineteenth-century sex murderer, but he couldn't seem to concentrate on the weighty, pontifical, ponderous style.

On impulse, he flipped up the heat control on his coverall and slid back the hatch of the bubble.

Ekstrohm walked through the alien grass and looked up at the unfamiliar constellations, smelling the frozen sterility of the thin air.

Behind him, his mates stirred without waking.

If

Ekstrohm was startled in the morning by a banging on the hatch of his bubble. It took him a few seconds to put his thoughts in order, and then he got up from the bunk where he had been resting, sleeplessly.

The angry burnt-red face of Ryan greeted him. "Okay, Stormy, this isn't the place for fun and games. What did you do with them?"

"Do with what?"

"The dead beastes. All the dead animals laying around the ship."

"What are you talking about, Ryan? What do you think I did with them?"

"I don't know. All I know is that they are gone."

"Gone?"

Ekstrohm shouldered his way outside and scanned the veldt.

There was no ring of animal corpses. Nothing. Nothing but wispy grass whipping in the keen breeze.

"I'll be damned," Ekstrohm said.

"You are right now, buddy. ExPe doesn't like anybody mucking up primary evidence."

"Where do you get off, Ryan? Ekstrohm demanded. "Why pick me for your patsy? This has got to be some kind of local phenomenon. Why accuse a shipmate of being behind this?"

"Listen, Ekstrohm, I want to give you the benefit of every doubt. But you aren't exactly the model of a surveyor, you know. You've been riding on a pink ticket for six years, you know that."

"No," Ekstrohm said. "No, I didn't know that."

"You've been hiding things from me and Nogol every jump we've made with you. Now comes this! It fits the pattern of secrecy and stealth you've been involved in."

"What could I do with your lousy dead bodies? What would I want with them?"

"All I know is that you were outside the bubbles last night, and you were the only sentient being who came in or out of our alarm web. The tapes show that. Now all the bodies are missing, like they got up and walked away."

It was not a new experience to Ekstrohm. No. Suspicion wasn't new to him at all.

"Ryan, there are other explanations for the disappearance of the bodies. Look for them, will you? I give you my word; I'm not trying to pull some stupid kind of joke, or to deliberately foul up the expedition. Take my word, can't you?"

Ryan shook his head. "I don't think I can. There's still such a thing as mental illness. You may not be responsible."

Ekstrohm scowled.

"Don't try anything violent, Stormy. I outweigh you fifty pounds and I'm fast for a big man."

"I wasn't planning on jumping you. Why do you have to jump me the first time something goes wrong? You've only got a lot of formless suspicions."

"Look, Ekstrohm, do you think I looked out the door and saw a lot of dead animals missing and immediately decided you did it to bedevil me? I've been up for hours--thinking--looking into this. You're the only possibility that's left."

"Why?"

* * * * *

"The bodies are missing. What could it be? Scavengers? The web gives us a complete census on everything inside it. The only animals inside the ring are more wart-hogs and, despite their appearance, they aren't carnivorous. Strictly grass-eaters. Besides, no animal, no insect, no process of decay could completely consume animals without a trace. There are no bones, no hide, no nothing."

"You don't know the way bacteria works on this planet. Radiation is so low, it may be particularly virulent."

"That's a possible explanation, although it runs counter to all the evidence we've established so far. There's a
much simpler explanation, Ekstrohm. You. You hid the bodies for some reason. What other reason could you have for prowling around out here at night?"

I couldn't sleep. The words were in his throat, but he didn't use them. They weren't an explanation. They would open more questions than they would answer.

"You're closing your eyes to the possibility of natural phenomenon, laying this on me. You haven't adequate proof and you know it."

"Ekstrohm, when something's stolen, you always suspect a suspicious character before you get around to the possibility that the stolen goods melted into thin air."

"What," Ekstrohm said with deadly patience, "what do you think I could have possibly done with your precious dead bodies?"

"You could have buried them. This is a big territory. We haven't been able to search every square foot of it."

"Ryan, it was thirty or forty below zero last night. How the devil could I dig holes in this ground to bury anything?"

"At forty below, how could your bacteria function to rot them away?"

Ekstrohm could see he was facing prejudice. There was no need to keep talking, and no use in it. Still, some reflex made him continue to frame reasonable answers.

"I don't know what bacteria on this planet can do. Besides, that was only one example of a natural phenomenon."

"Look, Ekstrohm, you don't have anything to worry about if you're not responsible. We're going to give you a fair test."

What kind of a test would it be? He wondered. And how fair?

Nogol came trotting up lightly.

"Ryan, I found some more wart-hogs and they keeled over as soon as they saw me."

"So it was xenophobia," Ekstrohm ventured.

"The important thing," Ryan said, with a sidelong glance at the surveyor, "is that now we've got what it takes to see if Ekstrohm has been deliberately sabotaging this expedition."

* * * * *

The body heat of the three men caused the air-conditioner of the tiny bubble to labor.

"Okay," Ryan breathed. "We've got our eyes on you, Ekstrohm, and the video circuits are wide open on the dead beasts. All we have to do is wait."

"We'll have a long wait," Nogol ventured. "With Ekstrohm here, and the corpses out there, nothing is going to happen."

That would be all the proof they needed, Ekstrohm knew. Negative results would be positive proof to them. His pink ticket would turn pure red and he would be grounded for life—if he got off without a rehabilitation sentence.

But if nothing happened, it wouldn't really prove anything. There was no way to say that the conditions tonight were identical to the conditions the previous night. What had swept away those bodies might be comparable to a flash flood. Something that occurred once a year, or once in a century.

And perhaps his presence outside was required in some subtle cause-and-effect relationship.

All this test would prove, if the bodies didn't disappear, was only that conditions were not identical to conditions under which they did disappear.

Ryan and Nogol were prepared to accept him, Ekstrohm, as the missing element, the one ingredient needed to vanish the corpses. But it could very well be something else.

Only Ekstrohm knew that it had to be something else that caused the disappearances.

Or did it?

He faced up to the question. How did he know he was sane? How could he be sure that he hadn't stolen and hid the bodies for some murky reason of his own? There was a large question as to how long a man could go without sleep, dreams and oblivion, and remain sane.

Ekstrohm forced his mind to consider the possibility. Could he remember every step he had taken the night before?

It seemed to him that he could remember walking past the creature lying in the grass, then walking in a circle, and coming back to the base. It seemed like that to him. But how could he know that it was true?

He couldn't.

* * * * *

There was no way he could prove, even to himself, that he had not disposed of those alien remains and then come back to his bubble, contented and happy at the thought of fooling those smug idiots who could sleep at night.

"How much longer do we have to wait?" Nogol asked. "We've been here nine hours. Half a day. The bodies are
right where I left them outside. There doesn't seem to be any more question."

Ekstrohm frowned. There was one question. He was sure there was one question.... Oh, yes. The question was:

How did he know he was sane?

He didn't know, of course. That was as good an answer as any. Might as well accept it; might as well let them
do what they wanted with him. Maybe if he just gave up, gave in, maybe he could sleep then. Maybe he could ...

Ekstrohm sat upright in his chair.

No. That wasn't the answer. He couldn't know that he was sane, but then neither could anybody else. The point
was, you had to go ahead living as if you were sane. That was the only way of living.

"Cosmos," Ryan gasped. "Would you look at that!"

Ekstrohm followed the staring gaze of the two men.

On the video grid, one of the "dead" animals was slowly rising, getting up, walking away.

"A natural phenomenon!" Ekstrohm said.

"Suspended animation!" Nogol ventured.

"Playing possum!" Ryan concluded.

Now came the time for apologies.

Ekstrohm had been through similar situations before, ever since he had been found walking the corridors at
college the night one of the girls had been attacked. He didn't want to hear their apologies; they meant nothing to
him. It was not a matter of forgiving them. He knew the situation had not changed.

They would suspect him just as quickly a second time.

"We're supposed to be an exploration team," Ekstrohm said quickly. "Let's get down to business. Why do you
suppose these alien creatures fake death?"

Nogol shrugged his wiry shoulders. "Playing dead is easier than fighting."

"More likely it's a method of fighting," Ryan suggested. "They play dead until they see an opening. Then--
rippppp."

"I think they're trying to hide some secret," Ekstrohm said.

"What secret?" Ryan demanded.

"I don't know," he answered. "Maybe I'd better--sleep on it."

III

Ryan observed his two crewmen confidently the next morning. "I did some thinking last night."

Great, Ekstrohm thought. For that you should get a Hazardous Duty bonus.

"This business is pretty simple," the captain went on, "these pigs simply play possum. They go into a state of
suspended animation, when faced by a strange situation. Xenophobia! I don't see there's much more to it."

"Well, if you don't see that there's more to it, Ryan--" Nogol began complacently.

"Wait a minute," Ekstrohm interjected. "That's a good theory. It may even be the correct one, but where's your
proof?"

"Look, Stormy, we don't have to have proof. Hell, we don't even have to have theories. We're explorers. We
just make reports of primary evidence and let the scientists back home in the System figure them out."

"I want this thing cleared up, Ryan. Yesterday, you were accusing me of being some kind of psycho who was
lousing up the expedition out of pure--pure--" he searched for a term currently in use in mentology--"demonia.
Maybe the boys back home will think the same thing. I want to be cleared."

"I guess you were cleared last night, Stormy boy," Nogol put in. "We saw one of the 'dead' pigs get up and walk
away."

"That didn't clear me," Ekstrohm said.

The other two looked like they had caught him cleaning wax out of his ear in public.

"No," Ekstrohm went on. "We still have no proof of what caused the suspended animation of the pigs.
Whatever caused it before caused it last night. You thought of accusing me, but you didn't think it through about
how I could have disposed of the bodies. Or, after you found out about the pseudo-death, how I might have caused
that. If I had some drug or something to cause it the first time, I could have a smaller dose, or a slowly dissolving
capsule for delayed effect."

The two men stared at him, their eyes beginning to narrow.

"I could have done that. Or either of you could have done the same thing."

"Me?" Nogol protested. "Where would my profit be in that?"

"You both have an admitted motive. You hate my guts. I'm 'strange,' 'different,' 'suspicious.' You could be
trying to frame me."

"That's insubordination," Ryan grated. "Accusations against a superior officer ..."

"Come off it, Ryan," Nogol sighed. "I never saw a three-man spaceship that was run very taut. Besides, he's
Beet-juice flowed out of Ryan's swollen face. "So where does that leave us?"
"Looking for proof of the cause of the pig's pseudo-death. Remember, I'll have to make counter-accusations against you two out of self-defense."
"Be reasonable, Stormy," Ryan pleaded. "This might be some deep scientific mystery we could never discover in our lifetime. We might never get off this planet."
That was probably behind his thinking all along, why he had been so quick to find a scapegoat to explain it all away. Explorers didn't have to have all the answers, or even theories. But, if they ever wanted to get anyplace in the Service, they damned well better.
"So what?" Ekstrohm asked. "The Service rates us as expendable, doesn't it?"
* * * * *
By Ekstrohm's suggestion, they divided the work.
Nogol killed pigs. All day he did nothing but scare the wart-hogs to death by coming near them.
Ryan ran as faithful a check on the corpses as he could, both by eyeball observation and by radar, video and Pro-Tect circuits. They lacked the equipment to program every corpse for every second, but a representative job could be done.
Finally, Ekstrohm went scouting for Something Else. He didn't know what he expected to find, but he somehow knew he would find something.
He rode the traction-scooter (so-called because it had no traction at all--no wheels, no slides, no contact with the ground or air) and he reflected that he was a suspicious character.
All through life, he was going around suspecting everybody and now everything of having some dark secret they were trying to hide.
A simple case of transference, he diagnosed, in long-discredited terminology. He had something to hide--his insomnia. So he thought everybody else had their guilty secret too.
How could there be any deep secret to the pseudo-death on this world? It was no doubt a simple fear reaction, a retreat from a terrifying reality. How could he ever prove that it was more? Or even exactly that?
Internal glandular actions would be too subtle for a team of explorers to establish. They could only go on behavior. What more in the way of behavior could he really hope to establish? The pattern was clear. The pigs keeled over at any unfamiliar sight or sound, and recovered when they thought the coast was clear. That was it. All there was! Why did he stubbornly, stupidly insist there was more to it?
Actually, by his insistence, he was giving weight to the idea of the others that he was strange and suspicious himself. Under the normal, sane conditions of planetfall the phobias and preoccupations of a space crew, nurtured in the close confines of a scout ship, wouldn't be taken seriously by competent men. But hadn't his subsequent behavior given weight to Ryan's unfounded accusations of irrational sabotage? Wouldn't it seem that he was actually daring the others to prove his guilt? If he went on with unorthodox behavior--
That was when Ekstrohm saw the flying whale.
* * * * *
Tension gripped Ekstrohm tighter than he gripped the handlebars of his scooter. He was only vaguely aware of the passing scenery. He knew he should switch on the homing beacon and ride in on automatic, but it seemed like too much of an effort to flick his finger. As the tension rose, the capillaries of his eyes swelled, and things began to white out for him. The rush of landscape became blurred streaks of light and dark, now mostly faceless light.
The flying whale. He had seen it.
Moreover, he had heard it, smelt and felt it. It had released a jet of air with a distinctive sound and odor. It had blown against his skin, ruffled his hair. It had been real.
But the flying whale couldn't have been real. Conditions on this planetoid were impossible for it. He knew planets and their life possibilities. A creature with a skeleton like that could have evolved here, but the atmosphere would never have supported his flesh and hide. Water bodies were of insufficient size. No, the whale was not native to this world.
Then what, if anything, did this flying alien behemoth have to do with the pseudo-death of the local pig creatures?
I'll never know, Ekstrohm told himself. Never. Ryan and Nogol will never believe me, they will never believe in the flying whale. They're explorers, simple men of action, unimaginative. Of course, I'm an explorer too. But I'm different, I'm sensitive--
Ekstrohm was riding for a fall.
The traction-scooter was going up a slope that had been eroded concave. It was at the very top of the half-moon angle, upside down, standing Ekstrohm on his head. Since he was not strapped into his seat, he fell.
As he fell he thought ruefully that he had contrived to have an accident in the only way possible with a traction-scooter. Ekstrohm's cranium collided with the ground, and he stopped thinking.

* * * * *

Ekstrohm blinked open his eyes, wondering. He saw light, then sky, then pigs.
Live pigs.
But--the pigs shouldn't be alive. When he was this close they should be dead.
Only they weren't.
Why ... why ...

He moved slightly and the nearest pig fell dead. The others went on with their business, roaming the plain. Ekstrohm expected the dropping of the pig to stampede the rest into dropping dead, but they didn't seem to pay any attention to their fallen member.

I've been lying here for hours, he realized. I didn't move in on them. The pigs moved in on me while I was lying still. If I keep still I can get a close look at them in action.

So far, even with video, it had been difficult to get much of an idea of the way these creatures lived--when they weren't dead.

Observe, observe, he told himself.
There might be some relationship between the flying whale and the pigs.

Could it be the whales were intelligent alien masters of these herds of pigs?
Ekstrohm lay still and observed.

Item: the pigs ate the soft, mosslike grass.
Item: the pigs eliminated almost constantly.
Item: the pigs fought regularly.
Fought?
Fought?

Here was something, Ekstrohm realized.
Why did animals fight?

Rationalizations of nature-lovers aside, some fought because they had plain mean nasty dispositions--like some people. That didn't fit the pigs. They were indolent grazers. They hadn't the energy left over for sheer-cussedness. There had to be a definite goal to their battles.

It wasn't food. That was abundant. The grassy veldt reached to all horizons.
Sex. They had to be fighting for mates!

He became so excited he twitched a foot slightly. Two more pigs dropped dead, but the others paid no heed.

He watched the lazily milling herd intently, at the same time keeping an eye out for the flying whales. Back on Earth porpoises had been taught to herd schools of fish and of whales. It was not impossible an intelligent species of whale had learned to herd masses of land animals.

But Ekstrohm knew he needed proof. He had to have something to link the pseudo-death of the wart-hogs to the inexplicable presence of the whales. Perhaps, he thought, the "death" of the pigs was the whales' way of putting them into cold storage--a method of making the meat seem unattractive to other animals, on a world perhaps without carrion scavengers....

Something was stirring among the pigs.

* * * * *

One under-sized beastie was pawing the dirt, a red eye set on the fattest animal in sight. Then Shortie charged Fatso. But abruptly a large raw-boned critter was in Shortie's path, barring him from Fatso.

Faced by Big Boy, Shortie trembled with rage and went into a terrible temper tantrum, rolling on the ground, pawing it in frenzy, squealing in maddened rage. Then Shortie was on his feet, desperate determination showing in every line of his body. With heedless, desperate, foolhardy courage he charged Big Boy.

Big Boy took the headlong charge in his side with only a trifling grunt.

Shortie bounced ten feet in the light gravity, and grimly wallowed to his feet. He leveled an eye at Big Boy, and his legs were pumping in frenzied fury again.

Big Boy shifted his kilos of weight casually and met Shortie head on.
The tremendous ker-rack reverberated from the bluff behind Ekstrohm.

Shortie lay on the ground.

No, Ekstrohm thought, he isn't dead. His sides were pumping in and out. But he was knocked cold.

Ekstrohm had to sympathize with him. He had never seen a more valiant try against insurmountable odds.

Big Boy was ambling over towards Fatso, apparently to claim his prize. Fatso apparently was the sow.
But Big Boy stalked on past Fatso. She squealed after him tentatively, but he turned and blasted her back with a bellowing snort.

Ekstrohm watched the scene repeated with other actors several times before he was sure.

The older males, the Big Boys, never collected the favors of the harem for themselves.

Instinctively, the pigs were practicing birth control. The older males abstained, and forced the younger males to do the same.

On a world like this, Ekstrohm's first thought was of death.

He thought, these pigs must be like lemmings, deliberately trying to destroy their own race, to commit geno-suicide.

But that didn't answer any of the other questions, about the pseudo-death, the alien whales ...

And then Ekstrohm thought not of death but of life.

IV

The traction-scooter was where he had left it, hanging upside down on the underside of the concave slope. It had stopped automatically when his weight had left the seat. He reached up, toggled the OVERRIDE switch and put it manually into reverse.

Once straightened out, he was on his way back to the base.

I feel good, he thought. I feel like I could lick my weight in spacemen.

Only then did he realize why he felt so good.

What had happened had been so strange for him, he couldn't realize what it had been until now.

While he had been knocked out, he had been asleep.

Asleep.

For the first time in years.

Sleep. He felt wonderful. He felt like he could lick all of his problems....

Ekstrohm roared back into the base. The motor was silent on the traction-scooter, of course, but the air he kicked up made its own racket.

Ryan and Nogol came out to greet him sullenly.

"Listen," he told them, "I've got the answer to all of this."

"So have we," Ryan said ugly. "The first answer was the right one. We've been scaring pigs to death and watching them, scaring and watching. We learned nothing. You knew we wouldn't. You set us up for this. It's like you said. You fed all of these beasts your stuff in advance, something that acts when they get excited...."

It didn't make sense, but then it never had. You couldn't argue with prejudice. He was "different." He didn't act like they did. He didn't believe the same things. He was the outsider, therefore suspect. The alien on an alien world.

Ekstrohm sighed. Man would always be the final alien, the creature man would never understand, sympathize with or even tolerate.

There was no point in trying to argue further, Ekstrohm realized.

"You'll never understand, Ryan. You could have seen all the things I saw if you'd bothered to look, but you were too anxious to blame me. But if I can't make you understand, I can at least beat you into acceptance."

"Huh?" Ryan ventured.

"I said," Ekstrohm repeated, "that I'm going to beat some sense into your thick skull."

Ryan grinned, rippled his massive shoulders and charged.

Ekstrohm remembered the lesson Shortie had taught him with Big Boy. He didn't meet the captain's charge head on. He sidestepped and caught Ryan behind the ear with his fist. The big man halted, puzzled. Ekstrohm sank his fist into the thick, solid belly.

Slowly, Ryan's knees gave way and he sank towards the ground.

When his chin was at the right level of convenience, Ekstrohm put his weight behind his right.

Ryan swayed dreamily backward.

But he threw himself forward and one ham of a fist connected high on Ekstrohm's cheek. He was shaken to his toes, and the several hours' old pain in the back of his head throbbed sickeningly. One more like that would do for him.

Ekstrohm stood and drove in a lot of short punches to Ryan's body, punches without much power behind them because he didn't have it. But he knew better than to try a massive attack on a massive target.

When he couldn't lift his arms any more, Ekstrohm stopped punching. He realized Ryan had fallen on his face a few seconds before.

Then he remembered, and whirled. He had left his back exposed to Nogol.

Nogol smiled. "I'm not drawing Hazard Pay."
After a while, Ekstrohm stopped panting and faced Nogol and the captain who was now sitting, rubbing his jaw. "Okay," he said, "now you'll listen or I'll beat your skulls in. I know what's behind all of this on this planet."

"Yeah? What do you think it is, Stormy?" Ryan asked.

"First of all, I think there's a basic difference between this world and any other the ExPe has investigated."

"Now what could that be?" Nogol wanted to know with a tiny smile.

"These worlds are close. The gravity is low. You wouldn't need much more than a jet plane to get from one of these planetoids to another. Some animals have developed with the power to travel from one of these planetoids to another--like a squid jetting out water. They harnessed some natural power system."

"What does that prove?" Ryan wanted to know.

"It proves that this world and others in this belt are prepared for interplanetary travel. It's probably a part of their basic evolutionary structure, unlike that of heavy, independent planets. This false 'dying' is part of their preparation for interplanetary visitors."

"Why would these aliens want others to think that they were dead?" Ryan asked.

"Correction, captain. They want visitors to believe that they can die."

* * * * *

Ryan blinked. "Meaning that they can't die?"

"That's right. I think everything on this planet has immortality," Ekstrohm said. "I'm not exactly sure how. Maybe it has to do with the low radiation. Every individual cell has a 'memory' of the whole creature. But as we age that 'memory' becomes faulty, our cells 'forget' how to reproduce themselves exactly. Here, that cell 'memory' never fades. Bodies renew themselves indefinitely."

"But why hide it?" Nogol asked.

"This planetoid can just support so many creatures. They practice birth control among themselves," the surveyor said. "The natives naturally want to discourage colonization."

Ryan whistled. "Once we report this, every rich and powerful man in the Federation will want to come here to live. There's not enough space to go around. There will be wars over this little hunk of rock."

Nogol's hard, dark eyes were staring into space. "There's only one sensible thing to do. We'll keep the world to ourselves."

"I don't like that kind of talk," Ryan growled.

"Ryan, this little ball of dirt isn't going to do the Federation as a whole any good. But it can be of value to us. We can make ourselves comfortable here. Later on, we can bring in some women. Any women we want. Who wouldn't want to come here?"

Ryan began to argue, but Ekstrohm could see he was hooked. The man who risked his life, the man who sought something new and different, the explorer, was basically an unstable type removed from the mainstream of civilization. Nothing was liable to change that.

By nightfall, Ryan and Ekstrohm had agreed.

"We'll have to keep a constant watch," Ryan was saying. "We'll have to watch out for ExPe scouts looking for us. Or, after a few generations, another ship may come to complete the mapping."

Nogol smiled. "We'll have to keep an eye on each other too, you know. One of us may get to wanting more room for more women. Or to have children, a normal biological urge. Death by violence isn't ruled out here."

"I don't like that kind of talk," Ryan blustered.

Nogol smiled.

Ekstrohm thought of the others, of the sleepless, watchful nights ahead of them. That was probably his trouble, all of his life. He didn't trust people; he had to stay awake and keep an eye on everybody. Well, he would be one ahead here.

Of course, it was wrong not to trust anybody, but Ekstrohm knew habit patterns were hard to break.

Sleep is a habit.

* * * * *

Ryan and Nogol were jarred awake in the night by the spaceship blasting off without them. They ran out and shook their tiny fists in fury at the rising flame.

Operating a spaceship alone was no cinch but it could be done. Ekstrohm would get back to the nearest Federation base and report the planetoid without death. He didn't have absolute confidence in any government, no. But he suspected the Federation could do more with the world than two men like Ryan and Nogol.

Ekstrohm took his fingers off the punchboard and lay back on his couch.

He yawned.

Ryan and Nogol were slow, but in time they might have learned to do without sleep, and to guard their treasure night and day.
Fortunately, Ekstrohm knew from long experience what the two others didn't. An eternity without sleep isn't worth the price.

--END
Above us curved the pale, hot bowl of cloudless sky; below us stretched the rolling, tawny wastes of the great Arabian Desert; and away to the east, close to the dipping horizon, scudded the tiny speck we were following. We had been following it since dawn and it was now close to sunset. Where was it leading us? Should we go on or turn back? How much longer would our gas and oil hold out? And just where were we? I turned and saw my questions reflected in the eyes of my companions, Paul Foulet of the French Sureté and Douglas Brice of Scotland Yard.

"Too fast!" shouted Brice above the roar of our motors. I nodded. His gesture explained his meaning. The plane ahead had suddenly taken on a terrific, unbelievable speed. All day it had traveled normally, maintaining, but not increasing, the distance between us. But in the last fifteen minutes it had leaped into space. Fifteen minutes before it had been two miles in the lead; now it was barely visible. A tiny, vanishing speck. What could account for this burst of superhuman speed? Who was in that plane? What was in that plane?

I glanced at Foulet. He shrugged non-committally, waving a courteous hand toward Brice. I understood; I agreed with him. This was Brice's party, and the decision was up to him. Foulet and I just happened to be along; it was partly design and partly coincidence.

* * * * *

Two days before I had been in Constantinople. I was disheartened and utterly disgusted. All the way from the home office of the United States Secret Service in Washington I had trailed my man, only to lose him. On steamships, by railway, airplane and motor we had traveled--always with my quarry just one tantalizing jump ahead of me--and in Constantinople I had lost him. And it was a ruse a child should have seen through. I could have beaten my head against a wall.

And then, suddenly, I had run into Foulet. Not ten days before I had talked to him in his office in Paris. I had told him a little of my errand, for I was working on the hunch that this man I was after concerned not only the United States, but France and the Continent as well. And what Foulet told me served only to strengthen my conviction. So, meeting him in Constantinople was a thin ray of light in my disgusted darkness. At least I could explode to a kindred spirit.

"Lost your man!" was his greeting. And it wasn't a question; it was a statement.

"How did you know?" I growled. My humiliation was too fresh to stand kidding.

"Constantinople," said Foulet amiably. "You always lose them in Constantinople. I've lost three here."

"Three?" I said, "Like mine!"

"Exactly," he nodded. Then he lowered his voice. "Come to my hotel. We can talk there."

"Now," he continued fifteen minutes later as we settled ourselves in his room, "you were very circumspect in Paris. You told me little--just a hint here and there. But it was enough. You--the United States--have joined our ranks--"

"You mean--"

"I mean that for a year we, the various secret service organizations of the Continent--and that includes, of course, Scotland Yard--have been after--Well, to be frank, we don't know what we're after. But we do know this. There is a power--there is someone, somewhere, who is trying to conquer the world."

"Are you serious?" I glanced at him but the tight lines of his set mouth convinced me. "I beg your pardon," I murmured. "Go ahead."

"I don't blame you for thinking it was a jest," he said imperturbably, "But, to prove I know what I'm talking about, let me tell you what this man has done whom you have been pursuing. He has done one of two things. Either he has proved himself a dangerous revolutionary or he has engineered the failure of a bank or chain of banks--"

"We can't prove it," I interrupted.

"No," said Foulet, "Neither can we. Neither can Scotland Yard--or the secret services of Belgium or Germany or Italy or Spain. But there you are--"

"You mean that in all these countries--?"

"I mean that for a year--probably longer--these countries have been and are being steadily, and systematically, undermined. The morale of the people is being weakened; their faith in their government is being betrayed--and someone is behind it. Someone who can think faster and plan more carefully than we--someone whose agents we always lose in Constantinople! I'll wager you lost your man from a roof-top."

I nodded, my disgust at my own stupidity returning in full force. "There was a lower roof and a maze of
crisscross alleys," I muttered. "He got away."

"Was there an airplane anywhere around?" asked Foulet.

I glanced at him in surprise. What good would an airplane have been on a roof-top ten feet wide by twelve feet long? Then I remembered. "There was an airplane," I said, "but it was a long way off, and I could scarcely see it; but the air was very still and I heard the motor."

Foulet nodded, "And if you had had a pair of glasses," he said gently, "You would have seen that the airplane had a glider attached to it. There is always an airplane--and a glider--when we lose our men from the roofs of Constantinople."

"But that must be coincidence!" I insisted. "Why, I was on that roof right on the fellow's heels--and the airplane was at least five miles away!"

Foulet shrugged, "Coincidence--possibly," he said, "but it is our only clue."

"Of course," I murmured thoughtfully, "you have never been able to follow--"

Foulet smiled, "Can you imagine where that airplane would be by the time we climbed down off our roofs and got to a flying field and started in pursuit?"

* * * * *

We descended for dinner. Foulet's story had restored my self-confidence somewhat--but I was still sore. Of course Foulet connecting my vanishing man with that disappearing airplane was absurd--but where had the man gone? Was my supposition that he had jumped to a lower roof, climbed a wall and run through the maze of alleyways in half a minute in any way less absurd?

We were halfway through dinner when Brice appeared. Brice was one of the best men in Scotland Yard and I had known him many years. So, evidently, had Foulet, for his eyes flickered faintly with pleased surprise at the sight of him. Brice came directly to our table. He was bursting with victorious joy. I could feel it somehow, although his face, carefully schooled to betray no emotion, was placid and casual.

All through the remainder of the meal I could feel the vibrations of his excitement. But it was only at the very end that he confided anything--and his confidence only served to make the excitement and sense of impending thrill greater.

Just as he was rising to leave he shoved a tiny strip of paper across the table to me with a sidelong glance at Foulet. "Another roof-top," I read scrawled in pencil. "If you like, meet me at the flying field before dawn." If I liked! I shoved the paper across to Foulet who read it and carelessly twisted it into a spill to light his cigar. But his hand shook ever so slightly.

Needless to say we went to the flying field shortly after midnight. Bruce was there, pacing up and down restlessly. Near him was a huge tri-motored biplane, its motor humming in readiness.

"I've put a man on the trail in my place," Brice told us briefly. "Somebody else is going to lose the scent on a roof-top--and I'm going to watch."

* * * * *

We settled to our wait. To me it seemed absurdly hopeless. The flying field was on a slight rise. Below us spread the dark shadow that was Constantinople. There was no moon to give it form and substance--it was just a lake of deeper darkness, a spreading mass of silent roof-tops and minarets. How did Brice expect to see his quarry escape? Suppose he fled during the night? And even with daylight--

The first streaks of dawn found us still waiting, our ears strained for the hum of an airplane motor. But hardly had the golden rim of the sun appeared over the horizon when it came. It came from the east--straight out of the golden glory of the sun. Nearer and nearer it came; an airplane--alone.

"It hasn't got the glider," muttered Foulet and his tone was tinged with disappointment. But hardly had he spoken when, from one of the myriad roof-tops below us, rose a swift streak of shadow. So fast it flew, with such unbelievable speed, that to our eyes it was little more than a blur; but--

"The glider!" Brice gasped. "My God! How did he do it?" We stared, silent with amazement. The airplane, that only a second before had flown alone, now was towing a glider--a glider that had arisen, as if by magic, from the housetops!

Another instant and we had piled into the cockpit of the tri-motored plane and were off on our pursuit. That pursuit that led us on and on till, as the sun sank behind us, we found ourselves above the illimitable, tawny wastes of the great Arabian Desert.

And now--what? All day long, as I have said, the plane we were pursuing had maintained, but never increased, the distance between us. Each hour had brought us renewed hope that the next hour would bring capture--or at least some definite clue, some shred of information. But the plane, still towing its glider, had gone on and on, steadily, imperturbably. And we dared not open fire and attempt to bring it down for fear of destroying our one meager chance of following it to its destination.
And now it had vanished. Suddenly, unaccountably it had taken on that terrific burst of speed which I have described. In ten minutes it had become a speck on the far horizon--in another instant it was gone. We were alone. Night was falling. If we turned back our gas might bring us to safety. If we went on--what?

I turned to my companions. Foulet still maintained his non-committal attitude, but Brice was deeply disappointed and worried. His ruddy English face was knotted in a scowl and his blue eyes were dark. Quickly he jerked his head back. We understood. Of course, turning back was the only thing to do; to go on was absurd. Our quarry had totally disappeared. But it was heart-breaking. Once again we had been fooled and outwitted. Our disappointment filled that tiny cockpit like a tangible mist. Brice threw over the stick with a gesture of disgust. In response our right wing lifted a bit, seemed to shake itself, then settled--and the plane continued on its course. Brice's eyes flickered with surprise. He shoved the stick back, threw it over again, but toward the opposite side. Obediently our left wing lifted as if to bank, a shudder passed through it, it dropped, the plane leveled, and went on.

Foulet leaned forward, his eyes were gleaming, his face flushed and eager. "Climb!" he yelled above the roar of the motors. "Up!" Brice nodded--but it was no use. That plane was like a live thing; nothing we could do would swerve it from its course. We stared at one another. Were we mad? Were we under a hypnotic spell? But our minds were clear, and the idea of hypnosis was absurd, for we had tried to turn back. It was the machine that refused to obey.

Again Foulet leaned forward. "Drop!" he yelled. Brice nodded, but the plane refused to respond. On and on, straight as a die, it sped.

"Try slowing the motor," I yelled into Brice's ear and both Foulet and I leaned forward to watch results.

The motors slowed. Gradually the roaring, pounding hum lessened, and our speed continued! The whine of the wind in the wires abated not one whit! The speedometer on our instrument board climbed!

Brice turned. His face, in the deepening dusk, was a blur of pasty white. His hands hung at his sides. The motors purred, pulsed, were silent. The plane, unaided, unguided, flew alone!

We sat hushed and unbelieving in that terrible, deathlike silence. Our ears, attuned all day to the deafening roar of the motors, felt as if they would burst in the sudden, agonizing stillness. There was not a sound save the whine of the wind in the wires as the plane sped on. Above us curved the illimitable arch of darkening sky. Below us lay the empty stretch of blank desert.

We didn't speak. I know that I, for one, could not bring my voice to break that ominous stillness. Silently we sat there, watching, waiting.... The quick darkness of the desert fell like a velvet curtain. The stars burst forth as if lit by an invisible hand. Foulet stirred, leaned forward, gasped. My eyes followed his gaze. Before our plane spread a path of light, dull, ruddily glowing, like the ghost of live embers. It cut the darkness of the night like a flaming finger--and along it we sped as if on an invisible track!

"The speed of that other plane," muttered Brice, breaking that utter silence, "This was it!"

Foulet and I nodded. Well could I imagine that we were travelling at that same terrific, impossible speed. And we were helpless--helpless in the clutch of--what? What power lay behind this band of light that drew us irresistibly toward it?

The ruddy pathway brightened. The light grew stronger. Our speed increased. The whine of the wires was tuned almost past human hearing. The plane trembled like a live thing in the grip of inhuman forces. A great glowing eye suddenly burst from the rim of the horizon--the source of the light! Instinctively I closed my eyes. What power might that eye possess? The same thought must have struck Brice and Foulet for they ducked to the floor of the cockpit, pulling me with them.

"Take care!" Brice muttered, "It might blind us."

We sat huddled in that cockpit for what seemed an eternity, though it couldn't have been more than two minutes. The glare increased. It threw into sharp, uncanny relief every tiny detail of the cockpit and of our faces. The light was as powerful as a searchlight, but not so blinding. It had a rosy, diffused quality that the searchlight lacks.

In that eternity of tense waiting I tried to collect my thoughts. I told myself that I must keep steady, that I must keep my mind clear. I struggled to get a grip on myself; the light, the steady flying without power, the boundless, horrible silence had shaken me. But there was more to come. I knew it. We all knew it. And it was not physical strength that would pull us through--it was wits. We must hold steady. Thank God we all had years of training--war experience, peace experience, countless life-and-death adventures--behind us. It would all count now. It would all help us to keep our brains clear and cool. Wits, I thought again, only our wits would stand between us and--what?

The ground wheels of the plane struck something solid; rolled; stopped! The light snapped off. The sudden blackness, falling like a blanket of thick fur, choked me. In that first dazed, gasping instant I was conscious of only
one thing. The plane was no longer in motion. But we had not dropped; of that I was sure. We were still, as we had been, close to two thousand feet above the earth!

Then came the sound of running feet and a confused blur of voices. The door of the cockpit was thrown open. A man leaned in, his hand on the jamb.

"Inspector Brice," he said quietly. "Monsieur Foulet. Lieutenant Ainslee. We are glad to welcome you." His words were courteous, but something in his tone sent a tingling chill down my spine. It was cold, as soulless as the clink of metal. It was dull, without life or inflection. But there was something else--something I could not name.

* * * * *

I was nearest the door and scrambled out first. To my surprise it was not dark. We were enveloped by a radiance, rosy as the broad ray had been, but fainter, like the afterglow of a sunset. By this light I could make out, vaguely, our surroundings. We seemed to be on a plateau; a great flat space probably an acre in extent, surrounded by a six-foot wall. Behind us there was a wide gateway through which our airplane had just come and across which workmen were dropping bars made of some material like cement. Before us, dotting this acre or so of plateau, were small, domed structures made of the same cement-like material. In the center of the plateau rose a larger domed building with a segment of its roof open to the stars and through this opening I could see the shadowy suggestion of a great lamp. There was the source of that powerful magnetic ray!

Foulet and Brice scrambled out and stood beside me. They said never a word, but I knew that every sense was alert.

"If you will follow me," that same cold, expressionless voice murmured. I turned to look at the man. He was not bad looking, clean shaven, well tailored. He swung his eyes to meet my gaze and as he did so that same chill fled along my spine. His eyes--what was the matter with them? They were dark--brown or black--and as shiny as shoe buttons. But there was no gleam of expression in them. Their shine was the glitter of polished glass.

Without a word we followed him across the small cleared space where our airplane stood, past a row of the small, domed structures to a low door cut in the white wall of the great central building. At the doorway he turned.

"I am taking you to the Master," he said; then, over his shoulder he added. "There is no means of escape--we are two thousand feet above the earth!" And he laughed--a quick, short cackle of crazy laughter. I felt the breath catch in my throat and the short hairs prickle at my neck. Foulet gripped my arm. Through my coat I could feel the chill of his fingers, but his grasp steadied me.

We walked on, following our guide. Down a narrow passageway, through a low arched door into a small room, evidently an ante-chamber to a larger room beyond. Without a word our guide left us, passing through another door which he closed after him.

Brice and Foulet and I exchanged looks, but we were silent. It might be we were watched. It might be that the very walls had ears. We could trust nothing.

Our guide returned. "The Master," he said and flung open a wide door.

* * * * *

We found ourselves in a large room filled with paraphernalia of all sorts: wires, lights, laboratory tables cluttered with test tubes and apparatus--and in the midst of this ordered chaos stood a man, his gleaming eyes watching us fixedly.

At first I was conscious of nothing but his eyes. Large, coal black and shiny with that peculiar, expressionless gloss I had noted in the eyes of our guide. Later I realized that he was of slight build, meticulously neat, with a tiny black waxed mustache and a carefully trimmed Van Dyke beard.

"Welcome to my floating island," he said gravely, never swerving those shiny eyes for an instant. "We have hoped long for your coming." He paused, noiselessly rubbing his hands, and watching us. We stared back, fascinated by that glossy, fixed gaze. "There is much to tell you," he went on, "and to ask you." He permitted himself a slow smile that spread his lips but failed to reach his eyes. "During your stay here," he continued, "which I hope will be both long and profitable, you will become my slaves and will know me as Master. But before you come under my domination you may know my name."

For the first time he moved his eyes. His glance swept the room as if to assure himself we were alone. He stepped, as swiftly and softly as a cat, over to the door through which we had entered, opened it, spoke to our guide who was waiting in the ante-room, closed it and returned. He faced us, his lips smiling and his eyes as blank as polished agate.

"My name," he said softly, "is Algernon--Frederick--Fraser!" He paused and watched us. Behind me I felt Foulet start; I heard Brice's quickly suppressed gasp. My own throat closed on words that might have been fatal. Algernon Frederick Fraser! Was it possible? Could it be?

Five years before Fraser had suddenly burst on the world of science. He had made some amazing discoveries regarding the power of light; discoveries that would reorganize the living conditions of the world. For a week or two
the papers were filled with the man's amazing genius; then no more was heard of him. Had he died? What was the story?

* * * * *

Two years passed and even the name of Fraser was forgotten. Then suddenly it burst forth again in the headlines of the world. Fraser had disappeared! Fraser had vanished! But not as a brilliant genius of science; he had gone as an escaped lunatic! After his amazing burst of fame his mind snapped. Somehow the story had been kept out of the press.

Fraser was incarcerated in a quiet, very private asylum, and that was all. All—until he escaped. When that happened the story couldn't be hushed any longer. The press was informed, the people were warned. He became known as the Mad Menace. The police and secret service organizations of the world searched for him. His name became a byword. Where had he gone? What would he do? What was his scheme? For he was still the astounding scientific genius. That portion of his mind was untouched. At the time of his escape the physicians in charge of the case assured the press that Fraser's scientific mind was every bit as sound as ever.

And that was all. Aside from his god Science he was a maniac—inhuman, cruel, unreasoning. What would such a man do loosed in the world? What might he not do? Was it possible that it was this man who stood before us now with his eyes fastened upon us so intently and his lips spread in that little, empty smile? Suddenly I knew! Those eyes! Those eyes were the shiny, vacuous, soulless eyes of a madman!

"I see," he said softly, "that you have heard of me. But it is three years since your world has seen me—yes?" He laughed—a low laugh that seemed to freeze the air around him. "They call me mad." His smile faded, his eyes bored through us like steel needles. "I am not mad! No madman could do what I have done in three years!" For the first time an expression flickered in his eyes—a crafty gleam of vanity that flared instantaneously. "Would you like to see?" He leaned toward us. We bowed, but it was Brice who spoke.

"Very much, Doctor Fraser—"

"Don't call me that!" The man whirled like a tiger ready to spring. "Don't call me that! I am Master here! Call me Master! Say it." His voice rose to a shriek. "Say it—Master!"

* * * * *

I clamped my teeth against the bloodless horror of that maniacal voice. It chilled my veins. Again I felt the hair rise on my scalp. Brice bowed quietly; and his eyes, serene and blue, met Fraser's fairly.

"Of course, Master." His low English voice soothed the bristling silence. "I am sure I speak for Monsieur Foulet and Lieutenant Ainslee when I say that we would be most deeply interested in your achievements."

Fraser was placated. He relaxed. He softly rubbed his hands while a smug, crafty smile flitted across his lips.

"You will follow me," he murmured.

He led the way back through the ante-room and down the passageway till we stood again under the stars, and again I was struck by the strange light, warm and faint and rosy like a sunset afterglow. As if he read my thought Fraser turned to me.

"I will show you first the source of this rosy light; that, I believe, will explain a great deal." He led the way down one of the narrow pathways between the low, domed houses—if they could be called houses, for they were little larger than kennels. At the six-foot wall that surrounded this plateau he paused. "Would you like to look over the wall?" he asked.

For the space of a breath we hesitated. Was this a trap? Through my mind flashed the words of the man who had guided us to Fraser. "You are two thousand feet above the earth," he had said. Was that true? And if it were, might not Fraser push us over the wall? But instantly logic came to my rescue. Fraser had brought us here, and he could have brought us for but one thing: to question us. Would he be apt to do us harm before those questions were asked? And besides, would Fraser's brilliantly subtle mind stoop so low as to destroy enemies by pushing them over a wall?

"Thank you," we murmured simultaneously. "This whole achievement is of tremendous interest to us," Foulet added.

Fraser chuckled. "It will be of greater interest—later," he said, and his blank, glittering eyes rested on first one of us, then another with a cold, satisfied gleam. Then he lifted his hand and opened a square door in the wall about the size of a port-hole. To my surprise the little door swung back as lightly as a feather and made scarcely a sound as it slammed against the wall itself. Again Fraser answered my unspoken thought.

"It has only substance," he said with his vain smirk. "No weight whatever. This entire platform together with its huts is lighter than air. If I should tear loose this little door it would float out of my hands instantly and go straight up to the stars. The substance—I have called it Fleotite—is not only lighter than air but lighter than ether."

"But we are not floating," said Brice; "we are stationary. Is the lightness of your Fleotite counteracted by the weight of the men and machines?"
Fraser shook his head. "Not entirely," he said. "But first look through this little window. Then I will explain."

Eagerly we pressed forward. Our danger was almost forgotten in our interest. This was amazing--stupendous! Together, shoulder to shoulder, we gazed through the aperture. We were suspended in space! Above us shone the blue-black Arabian night, and beneath us--far, far beneath--lay the sands of the desert looking rosy and warm in that same dull red glare of light that, to a fainter degree, gave us the effect of afterglow. But we were not floating; we were anchored as securely as a ship riding in a calm harbor.

We turned back to Fraser, amazed, awed, bursting with questions. Madman he might be, but he had wrought a miracle.

"I will explain," he said and his eyes gleamed with pride. "Of course you know of my tremendous discoveries connected with the power of light. At any rate, five years ago, the scientific world on earth thought they were tremendous. In reality that was nothing to my amazing strides in the past three years. There is nothing that cannot be done with light! Nothing!" For the first time Fraser's eyes became alive. They were illuminated. His whole body seemed to radiate light and fire and genius. We listened, fascinated.

"Take, for instance," he continued eagerly, "that ray with which I drew you and your plane to me. That ray is the pure power of magnetism. At full strength it will draw anything to it instantly. Fortunately the power can be regulated: I can switch a lever in my laboratory and draw things to me, via the ray, at any speed I wish--one hundred, two hundred, a thousand miles an hour."

"How far can you throw the ray?" asked Foulet, and I knew he was thinking of that glider that rose from the roof-tops of Constantinople. Fraser also knew he was thinking of that.

"I did not draw the glider," he said quietly. "The airplane I sent did that. My airplanes carry batteries of this ray. In the beginning I found gliders to be more practical for my purposes than airplanes. For one thing they were silent. My only problem was that of getting them off the ground. Once they were in the air I could manage everything. It was this problem that inspired this discovery and perfection of the ray. But, you asked how far I can throw the ray? This main lamp, that I operate myself from here, is effective at two hundred miles. At one hundred miles it enjoys its full power."

"And you can draw anything to you," asked Brice, "within the radius of the magnetic ray?"

"Anything in the air," answered Fraser. "But of course I must use caution. Great caution. If I drew planes to me indiscriminately I would draw attention to myself; my secret and my location here would leak out. No. That must not be. So the only planes I bring are my own--and yours." He paused and his black eyes, again glassy, swept over us. "It is a compliment I pay you," he said finally. "You have become too troublesome. You know too much. Sooner or later the time would come when you would combine your forces. That would be a nuisance. So I decided to bring you here."

"Suppose," asked Foulet curiously, "we hadn't fallen into your trap? Suppose we had turned back before reaching the point where your ray is effective?"

Fraser shook his head and that smug, offensive smile appeared again. "You were trapped from the beginning, though you didn't know it," he said. "The plane you were following was equipped with batteries of the ray which, while not as powerful as the lamp I have here, were still powerful enough to hold you to the course we choose you to run. But enough of the ray," he added impatiently. "There are one or two other things I want to explain and then--" he paused and the pause, somehow, was alive with menace. What was he going to do after he had finished treating us as honored guests? For the third time he answered my unspoken question. His eyes narrowed till they were black, glittering slits. His voice, as he leaned toward us, was no more than a hissing whisper.

"Slaves!" he said, and his lips twisted. "How will you like to be slaves of Mad Algy Fraser?" He laughed--a chuckle that started in his throat and rose and rose till it seemed to shatter my ear-drums. I felt my teeth grinding together and my nails bit my palms in my effort to control my nerves against the strain of that maniacal glee. Suddenly he sobered. His laugh died instantly like a radio that had been snapped off. "Listen and I will tell you. I will tell you everything because it is necessary for you to know so that you may work for me intelligently and you will remember better and be of greater use to me if I tell you now while you are yet--sane!"

"Sane!" The exclamation sprang from the three of us simultaneously. I felt a cold chill start between my shoulder blades. For an instant my breath choked in my throat. My heart paused--and then raced. What did he mean? What was he going to do to us? What scheme had he evolved in his crazed brain?

"I have perfected a serum"--his tone was professional, cold; he might have been talking to a class in a lecture room--"a serum that robs the patient of every vestige of human emotion--and therefore sanity. All his intellect, his memories, however, remain, to serve him in carrying out my orders. He loses all his will to live and resist, and
becomes nothing but an automaton, whose complete mental equipment is at my command."

There was silence. His glassy black eyes, blank and soulless, swept over us. His mouth curled in that smug, complacent smile. He had us with our shoulders to the floor. He knew it—and he knew we knew it. There was no possible way we could escape. We were two thousand feet above the earth. Our plane wouldn't get a quarter of a mile before the magnetic ray would bring it back. Parachute? Even supposing we could get parachutes where would we go? Drop two thousand feet into the middle of the Arabian Desert?

My brain raced. Never before had I been in such a tight place. And soon—if Fraser had his way—I wouldn't even have a mind to think with! I felt choked, stifled. Was there no way out? It seemed to me that a blanket—a soft, terrible blanket of uncontrollable circumstance—was being folded around me, robbing me of the use of my limbs, paralyzing me, numbing me. And out of this terrible helplessness came again Fraser's voice.

"I have told you enough," he said suavely, "so that you may have a faint idea of my power. I will send you now to Doctor Semple who will administer the serum and place you under the 'nourishment ray.' This is another of my discoveries," he added casually. "It is a ray which allows the patient to absorb, through the shell of the skin, sufficient nourishment, both solid and liquid, to last for twenty-four hours."

Five minutes later we stood in a small room that might have been the office of an up-to-date physician anywhere in the world. Across the polished top of a mahogany desk Dr. Semple stared at us, his eyes, like the eyes of our guide and Fraser, polished and expressionless. But now we understood. Those eyes were expressionless because there was nothing to give them expression. I tried to force my mind to comprehend the almost incomprehensible. We were among men who were not men! We were fast in the power of human beings who possessed no trace of humanity, who had become nothing but scientific Robots even though they still had bodies of flesh and blood! It was unbelievable! My hands grew cold and my brain hot at the thought. Yet, gazing into the bright, enameled eyes of Dr. Semple, I knew it was true.

Carefully, scientifically, we were prepared for our injections. And with every mechanical move of the doctor my mind seemed to take on fresh speed as it raced toward some solution to our terrible problem. My eyes flew around the tiny office searching for some means of escape. Doctor Semple turned to prepare the syringe. Behind his back Brice gestured frantically. Somehow I understood. In my pocket was a flask—a flask I had filled with drinking water in Constantinople. Bewildered, I handed it over to him.

The doctor turned, swabbed a patch of iodine on our arms, reached for the syringe. As he leaned over, Foulet thrust forward a foot. The doctor tripped, sprawled full length on the floor. Foulet and I quickly stooped to pick him up, standing between him and Brice—shielding his eyes so that he could not see. We fumbled to give Brice time. We apologized and soothed. Out of the tail of my eye I could see Brice working like lightning—emptying out the syringe of that villainous liquid, filling it with clear water.

It was done! We raised the doctor to his feet; gave his clothes a final brush. But as we stood back I know my hands were trembling and I had to clamp my teeth to keep them from chattering. Were we out of danger yet? Would the doctor discover our ruse? And, if we got out of his office without receiving the terrible injection, could we successfully fool Fraser and his "slaves" into believing we were mad? Fool them until we got a chance to escape? Could we simulate that glassy stare? Were we sufficiently good actors to get away with it? The questions pounded my mind. Was there any way we could simulate the symptoms that the doctors supposed to make us sick? Did it send us to sleep? How could we simulate symptoms when we had no idea what the doctors were supposed to do? What was the action of the serum? Did it act at once or slowly? Was it paralyzing me, numbing me. And out of this terrible helplessness came again Fraser's voice.

"You will lie down here," he said, opening a door into a room whose trails were lined with bunks, like an opium den. "In half an hour I will come for you. By that time—" His lips spread in that same travesty of a smile and raced through my brain in that instant when Doctor Semple turned again to his desk and picked up the syringe.

But the miracle happened! Mechanically he gave us the injection—never suspecting that it was not the devilish liquid he had put in, but only clear water! Then he stepped back and watched us. Cold chills raced up and down my spine. What were we supposed to do now? What was the action of the serum? Did it act at once or slowly? Was it supposed to make us sick? Did it send us to sleep? How could we simulate symptoms when we had no idea what these symptoms were supposed to be? But the cold voice of the doctor cut sharply across my agonized questions.

"You will lie down here," he said, opening a door into a room whose trails were lined with bunks, like an opium den. "In half an hour I will come for you. By that time—" His lips spread in that same travesty of a smile Fraser had employed.

We filed into the room and the door closed behind us. Obediently we lay down on the narrow bunks. We dared not speak. We scarcely dared glance at each other. We must act, at all times, as if we were observed. Might not Fraser have a ray that could penetrate walls? Might he not, even now, know that we had outwitted the doctor and had not received the fatal injection? And what then? Suppose Fraser himself superintended another injection? I pulled my thoughts back from the terrible supposition. One thing at a time. So far all had gone well. I lay down on the bunk and closed my eyes.

Half an hour later we heard the door open. Now, I, thought, when I look up, I am supposed to be mad! I struggled to make my mind a blank. I tried to force into my eyes that peculiar, brilliant, shiny, vacant expression I
had noticed. Would I succeed?

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I raised my eyes. The doctor was standing before us. With a gesture he bade Foulet go to him. I watched beneath lowered lids. Thank God he had called Foulet first. Foulet had dabbled in the psychology of insanity. Foulet would know how to act, and I would ape him. Coldly, mechanically Doctor Semple ran him through a few tests. I watched with bated breath. The doctor nodded. Foulet had passed!

It was my turn. I did exactly as Foulet had done--and succeeded! I had to turn away swiftly so that the doctor wouldn't see the gleam of triumph in my supposedly mad eyes.

He motioned to Brice. But just as Brice stepped forward the door opened and Fraser came into the room. For an instant everything reeled. We were gone! But even in that terrible instant of despair I remembered to keep my eyes blank. No trace of expression must appear or we were lost. I stretched my lips in that travesty of a smile I had seen the others use. Fraser stared at us, one after the other. He nodded.

"It is well," he said slowly and distinctly as if he were talking to small children. "Your names will still be as they were." We stared at him blankly and again he nodded. "You have forgotten your names--ah! Yours," he pointed to me, "was Ainslee, and it still is. And you are Monsieur Foulet. But Brice--" he paused. My heart hung in my breast, suspended there with terror. What was the matter with Brice? What did Fraser suspect--or know? He turned to the doctor. "You will give Inspector Brice another injection," he said. "The Inspector has a strong mind, and a clever one. A normal injection would not be enough."

It seemed to me that my blood froze. In that terrible instant it ran, like tingling ice, through my veins. Brice! The brainiest man in Scotland Yard! For Fraser was right. Brice had more brains than Foulet and I together. And in another half hour Brice would be no better than an idiot! For I didn't fool myself. Even Brice couldn't outwit Doctor Semple twice.

"You will follow me," said Fraser, turning to Foulet and me. "I will put you under the nourishment ray while Doctor Semple attends to Brice." Obediently, with slightly shuffling, gait and vacant eyes we followed him into an adjoining room, leaving Brice behind. I didn't even trust myself to glance at him as we left. But my heart was in my boots. When would we see him again? And what would he be?

* * * * *

The room we entered was dark, but instantly Fraser switched on a mellow, orange-colored light, that flooded the room with a deep, warm glow.

"Strip yourselves and sit down," he said, pointing to deep lounging chairs that filled the room. "You will do nothing. Relax and allow the light to bathe you. In half an hour I will come back with instructions."

We obeyed, I imitating blindly every vague, mechanical movement of Foulet's. We settled ourselves in the comfortable chairs and Fraser left us. He had told us to relax--but to do anything else would have been impossible. The light soothed us, eased us; gave us, somehow, a penetrating sensation of peace and complete comfort. It flowed around us, warming us, lulling us to a delicious dreamy state that was neither waking nor sleeping. It wiped out danger; it wiped out Time; nothing existed but this warm and relaxing sense of utter satisfaction and peace.

Through this mist of contentment came Fraser's voice, "That is all!" The light faded gradually, and as gradually we came to ourselves. "You will dress," directed Fraser in the same clear, clipped manner, "and you will come to me in my laboratory."

Fifteen minutes later we stood before him, vacant-eyed and solemn. Fraser fastened his black, polished eyes upon us. "You will tell me," he said distinctly, "all you know."

We were silent. How could we tell him all we knew when we were supposed to have forgotten everything? Was this a trap? Or did our inside secret service information come under the general head of Science? But before these questions had actually formed in my mind I remembered that several times Fraser had answered my questions before they were asked. Might he be a mind reader? Best to take no chances! I made my conscious mind as blank as possible and gazed back at him. At my side Foulet made a vague and uncertain noise in his throat.

"Your countries are afraid of me?" Fraser leaned forward, that smug, vain smile curling his lips. "Your countries know there is a power abroad stronger than they? They feel that between the twin horns of economic pressure and the red menace they will be tossed to destruction?

"Destruction?" repeated Foulet with all the vacant inflection of idiocy.

"Tossed?" I asked imitating Foulet. But instantly I wondered if we were taking the right tack for Fraser's eyes grew red with fury.

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"Answer me!" he raged. "Tell me that your countries know that soon I shall be master of the world! Tell me they are afraid of me! Tell me that in the last three years I have slowly gained control of commerce, of gold! Tell me that they know I hold the economic systems of the world in the hollow of my hand! Tell me that not a government
on earth but knows it is hanging on the brink of disaster! And I--I put it there! My agents spread the propaganda of
ruin! My agents crashed your Wall Street and broke your banks! II! II! Mad Alguy Fraser!” He stopped, gasping for
breath. His face was scarlet. His eyes glowed like red coals. Suddenly he burst into a cascade of maniacal laughter,
high, insane, terrible.

It took all my control to keep my eyes blank, my face devoid of expression. Out of the tail of my eye I saw
Foulet smiling, a vague, idiotic smile of sympathy with Fraser's glee. But suddenly the glee died--as suddenly as if a
button had snapped off the current. He leaned forward, his black eyes devouring our faces.

“'They are afraid of me?’ It was a whisper, sharply eager. ‘'The world knows I am Master?’”

“Master,” repeated Foulet. It wasn't quite a question, yet neither was it sufficiently definite as an answer to
arouse Fraser's suspicions. To my relief it satisfied him. The congested blood drained out of his face. His eyes lost
their glare. He turned and for several minutes tramped up and down the laboratory lost in thought. At last he came
back to us.

“I have changed my mind,” he muttered. “Come with me.”

Without a word we followed him, out through the door and down the passageway. Out of the building he led
us. The air was stirring with the first breath of dawn and along the horizon glowed a band of pure gold where the sun
would soon rise. When he had walked some thirty yards from the laboratory Fraser paused. With his toe he touched
a spring in the platform. A trap door instantly yawned at our feet. I suppressed a start just in time, but through my
body shot a thrill of fear. My muscles tensed. My heart raced. What now? Where could a trap door, two thousand
feet above the earth lead? Was he going to shove us into space because we refused to answer his questions?

“Go down,” Fraser ordered.

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For the space of a breath we hesitated. To disobey meant certain and instant death at the hands of this soulless
maniac. But to obey--to drop through this trap-door--also meant death. I took a step forward. Could we overpower
him? But what if we did? There were others here beside Fraser. How many others I had no idea, but surely enough
to make things impossible for Foulet and me. Yet we dared not even hesitate. To hesitate implied thinking--and a
man robbed of his brain cannot think! There was no way out. Together Foulet and I stepped to the brink of the
yawning hole....

For an instant we were almost blinded by a glare of rosy light that seemed to burst upon us from the earth so far
below. Here was the source of that strange afterglow! Away beneath us, evidently on the sands of the Arabian
desert, glowed four red eyes sending forth the rosy rays that converged at the center of the floating platform.
Instantly I comprehended Fraser's scheme. The Fleotite he had invented, and of which the platform and buildings
were made, was lighter than air. It followed, therefore, that if it were not anchored in some way it would instantly
rise. So Fraser had anchored it with four of his magnetic rays! He had told us that he could regulate the pulling
power of the ray, so what he had obviously done was to calculate to a nicety the lift of the Fleotite against the
magnetism of the rays.

But instantaneously with this thought came another. Fraser was urging us into the glow of the magnetic ray! If
once our bodies came entirely within the ray we would be yanked from the platform and dashed to death--sucked to
destruction on the sands below.

In my ear I heard Fraser's fiendish chuckle. “The instinct of fear still holds, eh? My serum can destroy your
conscious mind--but not your native fear? Cowards! Fools! But I am not going to push you off. Look!” With his foot
he pressed another lever which, while it did not shut off any of the light, seemed to deflect the ray. “Fools!” he said
again scornfully. "Go down!"

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Then it was I saw where he was sending us! Thirty feet below the platform there swung a small cabin, attached
by cables and reached by a swinging steel ladder. As I looked a door in the roof slid back. “Climb down!” ordered
Fraser again. There was nothing to do but obey. Accustomed as I was to flying, inured as I had become to great
heights, my head reeled and my hands grew icy as I swung myself through that trap door and felt for a footing on the
swinging ladder. Suppose Fraser turned the ray back on us as we climbed down? Suppose he cut the ladder? But
instantly my good sense told me he would do neither. If he had meant to kill us he could have done it easier than
this. No, somewhere in his mad head, he had a reason for sending us down to this swinging cabin.

In five minutes later Foulet and I stared at each other in the cramped confines of our prison. The tiny door in the
roof, through which we had dropped, was closed. The steel ladder had been pulled up. We were alone. Alone? Were
there no eyes that watched us still, or ears that listened to what we might say? Foulet evidently shared my sense of
espionage, for, without even a glance at me, he lay down on the hard floor of our bare little cabin and, to all intents
and purposes, fell asleep.

For a few minutes I stood staring at him, then followed his example. As I relaxed I realized I was tremendously
weary. The cumulative exhaustion of the past thirty-six hours seemed to crowd upon me with a smothering sense of physical oppression. I looked at my watch and wound it. Five o'clock. Through the narrow slits near the roof of our swinging cell I could see the changing light of dawn, melting in with the rosy glow from the magnetic rays. My eyelids drooped heavily....

When I awoke Foulet was standing near me, his arms folded across his chest, scowling thoughtfully. He nodded as he saw my open eyes, but when I started to speak he shook his head sharply. With his gesture there flooded back to me the feeling that we were watched--even through the walls of our aerial prison and the floor of the platform above us.  

I sat up and, clasping my knees with my hands, leaned against the wall. There must be a way out of this for us! All my life I had worked on the theory that if you thought hard enough there was a way out of any difficulty. But this seemed so hopeless! No matter how hard we thought the mad mind of Fraser would always be one jump ahead of us! And maybe we didn't dare even think! If Fraser were able to read minds--as I was nearly sure he was--then hadn't we better keep our minds blank even down here? But an instant's thought showed me the flaw in my logic. Fraser could, without much doubt, read minds--when those minds were close to him. If he could read minds at a distance then he wouldn't need to ask us for information.

But why had he put us here? I brooded around for the answer. Had he guessed we had outwitted Doctor Semple and not taken the mad serum after all, and was this punishment? No, if Fraser had guessed that he would simply have given us more serum, as he had Brice. Brice! Where was poor Brice now? Was he an idiot, with blank face and shiny, soulless eyes? My mind shuddered away from the thought, taking refuge in my first question: Why were we here? What was Fraser going to do with us?

We lost all track of time. In spite of my winding it my watch stopped and the hours slipped by uncounted. Night came, and another dawn and another night. Twice our roof was lifted and our tiny swinging cell filled with the orange light of the nourishment ray. But we saw no one nor did anyone speak to us. The third day passed in the same isolated silence. Occasionally Foulet or I would utter a monosyllable; the sound of our voices was comforting and the single words would convey little to a listener.

But as the hours of the third night slowly passed the atmosphere in our tiny swinging cell grew tense. Something was going to happen. I could feel it and I knew by Foulet's eyes that he felt it too. The air was tight, electrical. Standing on tiptoe, I glued my eyes to the narrow slit which was our only ventilation. But I could see nothing. The brilliant rosy glow blinded me. I couldn't even see the huge platform floating above our heads.

Then, suddenly, our roof slid back. The magnetic ray was deflected. Above us, in the opening of the trap-door, leered the bright, mad eyes of Fraser.  

"Good evening," he said mockingly. "How do you feel?" We smiled hesitantly. Something in his voice made me feel he was addressing us as sane men and not idiots. But why? Weren't we supposed to be idiots when he put us down there?

"You ought to feel all right," Fraser went on critically. "The first dose of that serum lasts only three days. It's cumulative," he added with his professional air. "In the beginning an injection every three days. Then once a week and so on. There's a man who has been with me for three years who needs treatment only once every three months. Well, are you ready to talk?"

So that was it! He had put us down here till the supposed effects of that serum had worn off; and now we were to talk; tell him everything his agents had been risking their lives to find out! We were to sell out our countries to him; betray all the secrets we had sworn by eternity to keep! If we did as he demanded both France and the United States would be at his mercy--and he had no mercy! He was not a man; he was a cruel, power-loving, scientific machine. I clamped my teeth. Never would I talk! I had sworn to protect my country's secrets with my life--and my vow would be kept!

"You will talk?" Fraser asked again, his voice suddenly suave and beseeching. "For those who talk there are--rewards."

"Let down the ladder," said Foulet, in a quiet, conversational tone. "It will be easier to discuss this--"

Fraser's eyes narrowed to gleaming slits. He smiled craftily. "The ladder will be let down--when you talk."

"And if," suggested Foulet, "we don't wish to talk?"

Fraser's lips stretched in a wider grin. His white teeth gleamed. His shiny black eyes glittered. In that warm, rosy light he looked like a demon from hell. He held out his hand. In it shone a long, slender instrument.

"This knife," he said softly, "Will cut the steel cables that connect you to this platform--as if they were cheese! You will talk?" Beside me I heard Foulet gasp. Swiftly my imagination conjured up the picture of our fate. Our determined refusal to divulge the secrets of our respective countries; the severing, one by one, of the four cables
holding us to the platform; the listing of our swinging cell; the tipping, the last, terrible plunge two thousand feet. But it would be swift. The power of the magnetic ray would give us no time to think--to suffer. It would be a merciful end....

"Let us up," bargained Foulet. "We will talk." Fraser laughed.
"None of that," he said slyly. "You talk from there and if your information doesn't dove-tail with what I already know--" he flourished the steel knife suggestively.

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We were caught! No amount of bluff would save us now. Fraser demanded that truth, facts, actual information--and he wouldn't be fooled by anything spurious. Foulet's shoulder touched mine as we peered up through the roof of our cell at our mad captor. We spoke together:

"There is nothing to say."

The assured smile left Fraser's lips. His eyes glittered red. His whole mad face was contorted with fury. A volley of oaths poured through his twisted mouth. With a gesture of insane rage he pulled the nearest cable to him and slashed it with the knife!

Our cell tilted. Foulet and I were thrown in a heap on the floor. We sprang up to face Fraser again through the roof. His mad eyes glared down at us, soul-chilling, maniacal.

"Talk!" he snarled. "Talk--or I'll slice another!" He drew the second cable to him, holding it in readiness.
I clenched my teeth. Beside me I could see the muscles of Foulet's jaw working. Talk? Never!

"Talk!" screamed Fraser. "Talk!" Our silence and our white faces were his only answer. There was a gleam of the knife in the rosy light. Our cell lurched, quivered, then caught. Would it hold with only two cables? It was hanging on its side. We were standing on what had been the wall. Through the opening in the roof we could see nothing but rosy light and distant stars. How strong were the cables? Could they hold against the pull of the magnetic ray? We could feel the pull now; feel the strain on the cables above us. If Fraser cut the third one--

"Talk!" his voice came, hoarse with fury. "Talk now! You can't see me," he went on; "but I'm pulling the third cable toward me. I'm raising the knife. Will you talk?"

Standing on that quaking wall Foulet and I stared at each other. How long would it be? One second? Half a minute? Thank God it would be quick! This was the worst now. This eternity of waiting.... "I'm cutting it!" yelled Fraser--and with his words the cell lurched, swung, whirled like a spinning top. Foulet and I were tossed around like dried peas in a pod.

Suddenly the thing steadied. Two steel hooks were clamped on the edge of the opening in what had been the roof, and Brice stared at us through the aperture!

"Quick!" he gasped. "There's not a second to lose. Don't stare! Quick, I say. I've got the ladder here. It's steel and it'll hold. Climb up."

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Dumbly we obeyed. Our heads were whirling, our bodies bruised and mashed by the shaking up. Blindly, dizzily we climbed up the ladder, scrambled out on the platform. Solid footing again! As Brice loosed the ladder and pulled it up, there was a snap. The last cable had gone! The cell shot down to earth with a speed that must have reduced it to a powder. Foulet and I stared after it, dazed, unbelieving. Brice's whisper hissed in our ears.

"Listen carefully," he gripped our shoulders. "I'm not mad. They shot the stuff into me, but I found an antidote in Semple's office and used it right away. Now listen to me! Our plane is over there," he pointed across the platform. "It's all ready to take off. They think they're sending me off on an errand for them at dawn. It's ready for a long trip. Go there; get in; and if any one questions you tell them it's orders. They won't, though. No one gives orders here but Fraser." Brice nodded toward a dark heap beside the trap-door.

"You killed him?" asked Foulet.

"Stunned him," said Brice. "He may come to at any moment and if he does--"

"Suppose we bind him and take him in the plane?" I suggested.

Brice shook his head. "Leave him here. It's safer. Now go. Get in the plane and take off--"

"And not wait for you?" I gasped, "You're crazy--"

"I'll be there. You can pick me up later. There's no time to explain--but you'll know. Take off; then circle around and come back. But watch out!" He gave us both a shove toward the plane, the dim shadow of which we could see across the platform.

We took a step toward it, and then turned back. How could we go without Brice? But he had vanished. And in the shadow of the trap door Fraser groaned.

We waited no longer. To hesitate was to court death. Deliberately, as if we were acting under orders, we walked toward the plane. As Brice had said, it was in readiness. Evidently he was to have started at once. We climbed in, our hearts in our throats. A mechanic stepped forward. The propeller roared. But, above the roar of the
propeller we heard a yell of fury—and Fraser, dazed and reeling, came stumbling across the platform toward us!

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Foulet took the controls. The plane taxied across the platform, swooped into space. But it was not till it had risen and steadied that I realized the complete idiocy of our forlorn hope of escape. What fools we were! And Brice—Brice must, in truth, be mad! How could we get away? How could we ever escape the terrific power of the magnetic ray? That ray that Fraser worked himself from his laboratory—the ray that had drawn us first across the desert to this floating island of madness! It would be a matter of seconds before Fraser would reach it and turn it on us. There was no escape—none!

In despair I looked back at the platform. To eyes ignorant of its horror it would have been an amazing and gorgeous sight. The crimson lamps of the magnetic ray bloomed like huge desert flowers on the sand two thousand feet below us; the rays flamed up with the glory of an Italian sunset and, poised in space like a dark butterfly, floated the huge platform bathed in its rosy light. It was beautiful. It was unbelievable. It was horrible. I gazed, fascinated. When would Fraser reach the lamp? When would he turn it on? I stared at the dark shadow that I knew was the laboratory building. My eyes strained through the growing distance. When would the glow come? That glow that meant our death!

Suddenly I gasped. The light had gone! The great lamps down on the desert floor were out! Darkness, swift, comforting, wrapped us in velvet folds.

"Brice!" I yelled. "Brice has cut off the lamps—he's released the platform. God! Look—Foulet!" My voice tore through my throat; my eyes burned with sudden, blinding emotion. In the soft darkness of the starry night I could see the platform waver, topple, rise! It rose straight up, tilting and swaying in the light breeze. What was it Fraser had said? If it was released it would go straight to the stars! It was on its way!

But Brice! Where was Brice? Was he on that terrible rising island? I strained my eyes through the darkness. Already Foulet had banked the plane—we were circling; turning back. A tiny white speck took shape beneath the rising island. A parachute! Brice was safe!

* * * * *

Ten minutes later we slid along the hard desert sand and came to a stop. Brice came running over toward us. Foulet and I climbed out of the plane to meet him. Silently we gripped hands. It was a solemn moment. Beside us reared the great plane that would take us back to safety—back to the familiar life we knew and loved. Around us stretched the trackless wastes of the Great Arabian Desert—and above, somewhere between us and the stars, soared the floating island of madness.

"They believed I was mad," said Brice as we climbed back into the plane. "I watched Fraser. I spied on the men. There were about thirty up there, and finally I saw where they regulated those lamps. The rest was easy—all except the minute when I found Fraser kneeling beside that trap-door slicing the cables. For a second I thought it was all up."

"You got us just in time," I muttered. But you can't be grateful with an Englishman. They won't stand for it.

"Oh, bosh," Brice murmured, as the plane swung its nose toward that far distance that was home. "Well, it's all over—but it's a story that can never be told. The fate of Mad Fraser will have to remain a mystery—for no one would believe us if we told them!"

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**Contents**

**THE EGO MACHINE**

By Henry Kuttner

*When a slightly mad robot drunk on AC, wants you to join an experiment in optimum ecology—don't do it! After all, who wants to argue like Disraeli or live like Ivan the Terrible?*

I

Nicholas Martin looked up at the robot across the desk.

"I'm not going to ask what you want," he said, in a low, restrained voice. "I already know. Just go away and tell St. Cyr I approve. Tell him I think it's wonderful, putting a robot in the picture. We've had everything else by now, except the Rockets. But clearly a quiet little play about Christmas among the Portuguese fishermen on the Florida coast must have a robot. Only, why not six robots? Tell him I suggest a baker's dozen. Go away."

"Was your mother's name Helena Glinska?" the robot asked.

"It was not," Martin said.
"Ah, then she must have been the Great Hairy One," the robot murmured.

Martin took his feet off the desk and sat up slowly.

"It's quite all right," the robot said hastily. "You've been chosen for an ecological experiment, that's all. But it won't hurt. Robots are perfectly normal life forms where I come from, so you needn't--"

"Shut up," Martin said. "Robot indeed, you--you bit-player! This time St. Cyr has gone too far." He began to shake slightly all over, with some repressed but strong emotion. The intercom box on the desk caught his eye, and he stabbed a finger at one of the switches. "Get me Miss Ashby! Right away!"

"I'm so sorry," the robot said apologetically. "Have I made a mistake? The threshold fluctuations in the neurons always upset my mnemonic norm when I temporalize. Isn't this a crisis-point in your life?"

Martin breathed hard, which seemed to confirm the robot's assumption.

"Exactly," it said. "The ecological imbalance approaches a peak that may destroy the life-form, unless ... mm-m. Now either you're about to be stepped on by a mammoth, locked in an iron mask, assassinated by helots, or--is this Sanskrit I'm speaking?" He shook his gleaming head. "Perhaps I should have got off fifty years ago, but I thought--sorry. Good-bye," he added hastily as Martin raised an angry glare.

Then the robot lifted a finger to each corner of his naturally rigid mouth, and moved his fingers horizontally in opposite directions, as though sketching an apologetic smile.

"No, don't go away," Martin said. "I want you right here, where the sight of you can refuel my rage in case it's needed. I wish to God I could get mad and stay mad," he added plaintively, gazing at the telephone.

"Are you sure your mother's name wasn't Helena Glinska?" the robot asked. It pinched thumb and forefinger together between its nominal brows, somehow giving the impression of a worried frown.

"Naturally I'm sure," Martin snapped.

"You aren't married yet, then? To Anastasia Zakharina-Koshkina?"

"Not yet or ever," Martin replied succinctly. The telephone rang. He snatched it up.

* * * * *

"Hello, Nick," said Erika Ashby's calm voice. "Something wrong?"

Instantly the fires of rage went out of Martin's eyes, to be replaced by a tender, rose-pink glow. For some years now he had given Erika, his very competent agent, ten percent of his take. He had also longed hopelessly to give her approximately a pound of flesh--the cardiac muscle, to put it in cold, unromantic terms. Martin did not; he put it in no terms at all, since whenever he tried to propose marriage to Erika he was taken with such fits of modesty that he could only babble o' green fields.

"Well," Erika repeated. "Something wrong?"

"Yes," Martin said, drawing a long breath. "Can St. Cyr make me marry somebody named Anastasia Zakharina-Koshkina?"

"What a wonderful memory you have," the robot put in mournfully. "Mine used to be, before I started temporalizing. But even radioactive neurons won't stand--"

"Nominally you're still entitled to life, liberty, et cetera," Erika said. "But I'm busy right now, Nick. Can't it wait till I see you?"

"When?"

"Didn't you get my message?" Erika demanded.

"Of course not," Martin said, angrily. "I've suspected for some time that all my incoming calls have to be cleared by St. Cyr. Somebody might try to smuggle in a word of hope, or possibly a file." His voice brightened. "Planning a jailbreak?"

"Oh, this is outrageous," Erika said. "Some day St. Cyr's going to go too far--"

"Not while he's got DeeDee behind him," Martin said gloomily. Summit Studios would sooner have made a film promoting atheism than offend their top box-office star, DeeDee Fleming. Even Tolliver Watt, who owned Summit lock, stock and barrel, spent wakeful nights because St. Cyr refused to let the lovely DeeDee sign a long-term contract.

"Nevertheless, Watt's no fool," Erika said. "I still think we could get him to give you a contract release if we could make him realize what a rotten investment you are. There isn't much time, though.

"Why not?"

"I told you--oh. Of course you don't know. He's leaving for Paris tomorrow morning," Martin moaned. "Then I'm doomed," he said. "They'll pick up my option automatically next week and I'll never draw a free breath again. Erika, do something!"

"I'm going to," Erika said. "That's exactly what I want to see you about. Ah," she added suddenly, "now I understand why St. Cyr stopped my message. He was afraid. Nick, do you know what we've got to do?"

"See Watt?" Nick hazarded unhappily. "But Erika--"
"Not if St. Cyr can help it," Nick reminded her.
"Exactly. Naturally St. Cyr doesn't want us to talk to Watt privately. We might make him see reason. But this
time, Nick, we've simply got to manage it somehow. One of us is going to talk to Watt while the other keeps St. Cyr
at bay. Which do you choose?"
"Neither," Martin said promptly.
"Oh, Nick! I can't do the whole thing alone. Anybody'd think you were afraid of St. Cyr."
"I am afraid of St. Cyr," Martin said.
"Nonsense. What could he actually do to you?"
"He could terrorize me. He does it all the time. Erika, he says I'm indoctrinating beautifully. Doesn't it make
your blood run cold? Look at all the other writers he's indoctrinated."
"I know. I saw one of them on Main Street last week, delving into garbage cans. Do you want to end up that
way? Then stand up for your rights!"
"Ah," said the robot wisely, nodding. "Just as I thought. A crisis-point."
"Shut up," Martin said. "No, not you, Erika. I'm sorry."
"So am I," Erika said tartly. "For a moment I thought you'd acquired a backbone."
"If I were somebody like Hemingway--" Martin began in a miserable voice.
"Did you say Hemingway?" the robot inquired. "Is this the Kinsey-Hemingway era? Then I must be right.
You're Nicholas Martin, the next subject. Martin, Martin? Let me see--oh yes, the Disraeli type, that's it." He rubbed
his forehead with a grating sound. "Oh, my poor neuron thresholds! Now I remember."

* * * * *
"Nick, can you hear me?" Erika's voice inquired. "I'm coming over there right away. Brace yourself. We're
going to beard St. Cyr in his den and convince Watt you'll never make a good screen-writer. Now--"
"But St. Cyr won't ever admit that," Martin cried. "He doesn't know the meaning of the word failure. He says
so. He's going to make me into a screen-writer or kill me."
"Remember what happened to Ed Cassidy?" Erika reminded him grimly. "St. Cyr didn't make him into a
screen-writer."
"True. Poor old Ed," Martin said, with a shiver.
"All right, then. I'm on my way. Anything else?"
"Yes!" Martin cried, drawing a deep breath. "Yes, there is! I love you madly!"
But the words never got past his glottis. Opening and closing his mouth noisely, the cowardly playwright
finally clenched his teeth and tried again. A faint, hopeless squeak vibrated the telephone's disk. Martin let his
shoulders slump hopelessly. It was clear he could never propose to anybody, not even a harmless telephone.
"Did you say something?" Erika asked. "Well, good-bye then."
"Wait a minute," Martin said, his eyes suddenly falling once more upon the robot. Speechless on one subject
only, he went on rapidly, "I forgot to tell you. Watt and the nest-fouling St. Cyr have just hired a mock-up phony
robot to play in Angelina Noel!"
But the line was dead.
"I'm not a phony," the robot said, hurt.
Martin fell back in his chair and stared at his guest with dull, hopeless eyes. "Neither was King Kong," he
remarked. "Don't start feeding me some line St. Cyr's told you to pull. I know he's trying to break my nerve. He'll
probably do it, too. Look what he's done to my play already. Why Fred Waring? I don't mind Fred Waring in his
proper place. There he's fine. But not in Angelina Noel. Not as the Portuguese captain of a fishing boat manned by
his entire band, accompanied by Dan Dailey singing Napoli to DeeDee Fleming in a mermaid's tail--"
Self-stunned by this recapitulation, Martin put his arms on the desk, his head in his hands, and to his horror
found himself giggling. The telephone rang. Martin groped for the instrument without rising from his semi-
recumbent position.
"Who?" he asked shakily. "Who? St. Cyr--"
A hoarse bellow came over the wire. Martin sat bolt upright, seizing the phone desperately with both hands.
"Listen!" he cried. "Will you let me finish what I'm going to say, just for once? Putting a robot in Angelina Noel is simply--"
"I do not hear what you say," roared a heavy voice. "Your idea stinks. Whatever it is. Be at Theater One for
yesterday's rushes! At once!"
"But wait--"
St. Cyr belched and hung up. Martin's strangling hands tightened briefly on the telephone. But it was no use.
The real strangle-hold was the one St. Cyr had around Martin's throat, and it had been tightening now for nearly
thirteen weeks. Or had it been thirteen years? Looking backward, Martin could scarcely believe that only a short
time ago he had been a free man, a successful Broadway playwright, the author of the hit play Angelina Noel. Then
had come St. Cyr....

A snob at heart, the director loved getting his clutches on hit plays and name writers. Summit Studios, he had
roared at Martin, would follow the original play exactly and would give Martin the final okay on the script, provided
he signed a thirteen-week contract to help write the screen treatment. This had seemed too good to be true--and was.

Martin's downfall lay partly in the fine print and partly in the fact that Erika Ashby had been in the hospital
with a bad attack of influenza at the time. Buried in legal verbiage was a clause that bound Martin to five years of
servitude with Summit should they pick up his option. Next week they would certainly do just that, unless justice
prevailed.

* * * * *

"I think I need a drink," Martin said unsteadily. "Or several." He glanced toward the robot. "I wonder if you'd
mind getting me that bottle of Scotch from the bar over there."

"But I am here to conduct an experiment in optimum ecology," said the robot.

Martin closed his eyes. "Pour me a drink," he pleaded. "Please. Then put the glass in my hand, will you? It's not
much to ask. After all, we're both human beings, aren't we?"

"Well, no," the robot said, placing a brimming glass in Martin's groping fingers. Martin drank. Then he opened
his eyes and blinked at the tall highball glass in his hand. The robot had filled it to the brim with Scotch. Martin
turned a wondering gaze on his metallic companion.

"You must do a lot of drinking yourself," he said thoughtfully. "I suppose tolerance can be built up. Go ahead.
Help yourself. Take the rest of the bottle."

The robot placed the tip of a finger above each eye and slid the fingers upward, as though raising his eyebrows
inquiringly.

"Go on, have a jolt," Martin urged. "Or don't you want to break bread with me, under the circumstances?"

"How can I?" the robot asked. "I'm a robot." His voice sounded somewhat wistful. "What happens?" he
inquired. "Is it a lubricatory or a fueling mechanism?"

Martin glanced at his brimming glass.

"Fueling," he said tersely. "High octane. You really believe in staying in character, don't you? Why not--"

"Oh, the principle of irritation," the robot interrupted. "I see. Just like fermented mammoth's milk."

Martin choked. "Have you ever drunk fermented mammoth's milk?" he inquired.

"How could I?" the robot asked. "But I've seen it done." He drew a straight line vertically upward between his
invisible eyebrows, managing to look wistful. "Of course my world is perfectly functional and functionally perfect,
but I can't help finding temporalizing a fascina--" He broke off. "I'm wasting space-time. Ah. Now. Mr. Martin,
would you be willing to--"

"Oh, have a drink," Martin said. "I feel hospitable. Go ahead, indulge me, will you? My pleasures are few. And
I've got to go and be terrorized in a minute, anyhow. If you can't get that mask off I'll send for a straw. You can step
out of character long enough for one jolt, can't you?"

"I'd like to try it," the robot said pensively. "Ever since I noticed the effect fermented mammoth's milk had on
the boys, it's been on my mind, rather. Quite easy for a human, of course. Technically it's simple enough, I see now.
The irritation just increases the frequency of the brain's kappa waves, as with boosted voltage, but since electrical
voltage never existed in pre-robot times--"

"It did," Martin said, taking another drink. "I mean, it does. What do you call that, a mammoth?" He indicated
the desk lamp.

The robot's jaw dropped.

"That?" he asked in blank amazement. "Why--why then all those telephone poles and dynamos and lighting-
equipment I noticed in this era are powered by electricity!"

"What did you think they were powered by?" Martin asked coldly.

"Slaves," the robot said, examining the lamp. He switched it on, blinked, and then unscrewed the bulb.

"Voltage, you say?"

"Don't be a fool," Martin said. "You're overplaying your part. I've got to get going in a minute. Do you want a
jolt or don't you?"

"Well," the robot said, "I don't want to seem unsociable. This ought to work." So saying, he stuck his finger in
the lamp-socket. There was a brief, crackling flash. The robot withdrew his finger.

"F(t)--" he said, and swayed slightly. Then his fingers came up and sketched a smile that seemed, somehow, to
express delighted surprise.

"Fff(t)!" he said, and went on rather thickly, "F(t) integral between plus and minus infinity ... a-sub-n to e...."
Martin’s eyes opened wide with shocked horror. Whether a doctor or a psychiatrist should be called in was debatable, but it was perfectly evident that this was a case for the medical profession, and the sooner the better. Perhaps the police, too. The bit-player in the robot suit was clearly as mad as a hatter. Martin poised indecisively, waiting for his lunatic guest either to drop dead or spring at his throat.

The robot appeared to be smacking his lips, with faint clicking sounds.
"Why, that's wonderful," he said. "AC, too."
"Y-you're not dead?" Martin inquired shakily.
"I'm not even alive," the robot murmured. "The way you'd understand it, that is. Ah--thanks for the jolt."

Martin stared at the robot with the wildest dawning of surmise.
"Why--" he gasped. "Why--you're a robot!"
"Certainly I'm a robot," his guest said. "What slow minds you pre-robots had. Mine's working like lightning now." He stole a drunkard's glance at the desk-lamp. "F(t)--I mean, if you counted the kappa waves of my radio-atomic brain now, you'd be amazed how the frequency's increased." He paused thoughtfully. "F(t)," he added.

Moving quite slowly, like a man under water, Martin lifted his glass and drank whiskey. Then, cautiously, he looked up at the robot again.
"F(t)--" he said, paused, shuddered, and drank again. That did it. "I'm drunk," he said with an air of shaken relief. "That must be it. I was almost beginning to believe--"

"Oh, nobody believes I'm a robot at first," the robot said. "You'll notice I showed up in a movie lot, where I wouldn't arouse suspicion. I'll appear to Ivan Vasilovich in an alchemist's lab, and he'll jump to the conclusive I'm an automaton. Which, of course, I am. Then there's a Uighur on my list--I'll appear to him in a shaman's hut and he'll assume I'm a devil. A matter of ecologicologic."

"Then you're a devil?" Martin inquired, seizing on the only plausible solution.
"No, no, no. I'm a robot. Don't you understand anything?"
"I don't even know who I am, now," Martin said. "For all I know, I'm a faun and you're a human child. I don't think this Scotch is doing me as much good as I'd--"

"Your name is Nicholas Martin," the robot said patiently. "And mine is ENIAC."
"Eniac?"
"ENIAC," the robot corrected, capitalizing. "ENIAC Gamma the Ninety-Third."

So saying, he unslung a sack from his metallic shoulder and began to rummage out length upon length of what looked like red silk ribbon with a curious metallic lustre. After approximately a quarter-mile of it had appeared, a crystal football helmet emerged attached to its end. A gleaming red-green stone was set on each side of the helmet.
"Just over the temporal lobes, you see," the robot explained, indicating the jewels. "Now you just set it on your head, like this--"

"Oh no I don't," Martin said, withdrawing his head with the utmost rapidity. "Neither do you, my friend. What's the idea? I don't like the looks of that gimmick. I particularly don't like those two red garnets on the sides. They look like eyes."

"Those are artificial eclogite," the robot assured him. "They simply have a high dielectric constant. It's merely a matter of altering the normal thresholds of the neuron memory-circuits. All thinking is based on memory, you know. The strength of your associations--the emotional indices of your memories--channel your actions and decisions, and the ecologizer simply changes the voltage of your brain so the thresholds are altered."

"Is that all it does?" Martin asked suspiciously.
"Well, now," the robot said with a slight air of evasion. "I didn't intend to mention it, but since you ask--it also imposes the master-matrix of your character type. But since that's the prototype of your character in the first place, it will simply enable you to make the most of your potential ability, hereditary and acquired. It will make you react to your environment in the way that best assures your survival."

"Not me, it won't," Martin said firmly. "Because you aren't going to put that thing on my head."

The robot sketched a puzzled frown. "Oh," he said after a pause. "I haven't explained yet, have I? It's very simple. Would you be willing to take part in a valuable socio-cultural experiment for the benefit of all mankind?"

"No," Martin said.
"But you don't know what it is yet," the robot said plaintively. "You'll be the only one to refuse, after I've explained everything thoroughly. By the way, can you understand me all right?"

Martin laughed hollowly. "Natch," he said.
"Good," the robot said, relieved. "That may be one trouble with my memory. I had to record so many languages before I could temporalize. Sanskrit's very simple, but medieval Russian's confusing, and as for Uighur--however! The purpose of this experiment is to promote the most successful pro-survival relationship between man and his
environment. Instant adaptation is what we're aiming at, and we hope to get it by minimizing the differential between individual and environment. In other words, the right reaction at the right time. Understand?"

"Of course not," Martin said. "What nonsense you talk."

"There are," the robot said rather wearily, "only a limited number of character matrices possible, depending first on the arrangement of the genes within the chromosomes, and later upon environmental additions. Since environments tend to repeat--like societies, you know--an organizational pattern isn't hard to lay out, along the Kaldekooz time-scale. You follow me so far?"

"By the Kaldekooz time-scale, yes," Martin said.

"I was always lucid," the robot remarked a little vainly, nourishing a swirl of red ribbon.

"Keep that thing away from me," Martin complained. "Drunk I may be, but I have no intention of sticking my neck out that far."

"Of course you'll do it," the robot said firmly. "Nobody's ever refused yet. And don't bicker with me or you'll get me confused and I'll have to take another jolt of voltage. Then there's no telling how confused I'll be. My memory gives me enough trouble when I temporalize. Time-travel always raises the synaptic delay threshold, but the trouble is it's so variable. That's why I got you mixed up with Ivan at first. But I don't visit him till after I've seen you--I'm running the test chronologically, and nineteen-fifty-two comes before fifteen-seventy, of course."

"It doesn't," Martin said, tilting the glass to his lips. "Not even in Hollywood does nineteen-fifty-two come before fifteen-seventy."

"I'm using the Kaldekooz time-scale," the robot explained. "But really only for convenience. Now do you want the ideal ecological differential or don't you? Because--" Here he flourished the red ribbon again, peered into the helmet, looked narrowly at Martin, and shook his head.

"I'm sorry," the robot said. "I'm afraid this won't work. Your head's too small. Not enough brain-room, I suppose. This helmet's for an eight and a half head, and yours is much too--"

"My head is eight and a half," Martin protested with dignity.

"Can't be," the robot said cunningly. "If it were, the helmet would fit, and it doesn't. Too big."

"It does fit," Martin said.

"That's the trouble with arguing with pre-robot species," ENIAC said, as to himself. "Low, brutish, unreasoning. No wonder, when their heads are so small. Now Mr. Martin--" He spoke as though to a small, stupid, stubborn child. "Try to understand. This helmet's size eight and a half. Your head is unfortunately so very small that the helmet wouldn't fit--"

"Blast it!" cried the infuriated Martin, caution quite lost between Scotch and annoyance. "It does fit! Look here!" Recklessly he snatched the helmet and clapped it firmly on his head. "It fits perfectly!"

"I erred," the robot acknowledged, with such a gleam in his eye that Martin, suddenly conscious of his rashness, jerked the helmet from his head and dropped it on the desk. ENIAC quietly picked it up and put it back into his sack, stuffing the red ribbon in after it with rapid motions. Martin watched, baffled, until ENIAC had finished, gathered together the mouth of the sack, swung it on his shoulder again, and turned toward the door.

"Good-bye," the robot said. "And thank you."

"For what?" Martin demanded.

"For your cooperation," the robot said.

"I won't cooperate," Martin told him flatly. "It's no use. Whatever fool treatment it is you're selling, I'm not going to--"

"Oh, you've already had the ecology treatment," ENIAC replied blandly. "I'll be back tonight to renew the charge. It lasts only twelve hours."

"What?"

ENIAC moved his forefingers outward from the corners of his mouth, sketching a polite smile. Then he stepped through the door and closed it behind him.

Martin made a faint squealing sound, like a stuck but gagged pig.

Something was happening inside his head.

II

Nicholas Martin felt like a man suddenly thrust under an ice-cold shower. No, not cold--steaming hot. Perfumed, too. The wind that blew in from the open window bore with it a frightful stench of gasoline, sagebrush, paint, and--from the distant commissary--ham sandwiches.

"Drunk," he thought frantically. "I'm drunk--or crazy!" He sprang up and spun around wildly; then catching sight of a crack in the hardwood floor he tried to walk along it. "Because if I can walk a straight line," he thought, "I'm not drunk. I'm only crazy...." It was not a very comforting thought.

He could walk it, all right. He could walk a far straighter line than the crack, which he saw now was
microscopically jagged. He had, in fact, never felt such a sense of location and equilibrium in his life. His experiment carried him across the room to a wall-mirror, and as he straightened to look into it, suddenly all confusion settled and ceased. The violent sensory perceptions leveled off and returned to normal.

Everything was quiet. Everything was all right.

Martin met his own eyes in the mirror.

Everything was not all right.

He was stone cold sober. The Scotch he had drunk might as well have been spring-water. He leaned closer to the mirror, trying to stare through his own eyes into the depths of his brain. For something extremely odd was happening in there. All over his brain, tiny shutters were beginning to move, some sliding up till only a narrow crack remained, through which the beady little eyes of neurons could be seen peeping, some sliding down with faint crashes, revealing the agile, spidery forms of still other neurons scuttling for cover.

Altered thresholds, changing the yes-and-no reaction time of the memory-circuits, with their key emotional indices and associations ... huh?

The robot!

Martin's head swung toward the closed office door. But he made no further move. The look of blank panic on his face very slowly, quite unconsciously, began to change. The robot ... could wait.

Automatically Martin raised his hand, as though to adjust an invisible monocle. Behind him, the telephone began to ring. Martin glanced at it.

His lips curved into an insolent smile.

Flicking dust from his lapel with a suave gesture, Martin picked up the telephone. He said nothing. There was a long silence. Then a hoarse voice shouted, "Hello, hello, hello! Are you there? You, Martin!"

Martin said absolutely nothing at all.

"You keep me waiting," the voice bellowed. "Me, St. Cyr! Now jump! The rushes are ... Martin, do you hear me?"

Martin gently laid down the receiver on the desk. He turned again toward the mirror, regarded himself critically, frowned.

"Dreary," he murmured. "Distinctly dreary. I wonder why I ever bought this necktie?"

The softly bellowing telephone distracted him. He studied the instrument briefly, then clapped his hands sharply together an inch from the mouthpiece. There was a sharp, anguished cry from the other end of the line.

"Very good," Martin murmured, turning away. "That robot has done me a considerable favor. I should have realized the possibilities sooner. After all, a super-machine, such as ENIAC, would be far cleverer than a man, who is merely an ordinary machine. Yes," he added, stepping into the hall and coming face to face with Toni LaMotta, who was currently working for Summit on loan. "'Man is a machine, and woman--'" Here he gave Miss LaMotta a look of such arrogant significance that she was quite startled.

"'And woman--a toy,'" Martin amplified, as he turned toward Theater One, where St. Cyr and destiny awaited him.

* * * * *

Summit Studios, outdoing even MGM, always shot ten times as much footage as necessary on every scene. At the beginning of each shooting day, this confusing mass of celluloid was shown in St. Cyr's private projection theater, a small but luxurious domed room furnished with lie-back chairs and every other convenience, though no screen was visible until you looked up. Then you saw it on the ceiling.

When Martin entered, it was instantly evident that ecology took a sudden shift toward the worse. Operating on the theory that the old Nicholas Martin had come into it, the theater, which had breathed an expensive air of luxurious confidence, chilled toward him. The nap of the Persian rug shrank from his contaminating feet. The chair he stumbled against in the half-light seemed to shrug contemptuously. And the three people in the theater gave him such a look as might be turned upon one of the larger apes who had, by sheer accident, got an invitation to Buckingham Palace.

DeeDee Fleming (her real name was impossible to remember, besides having not a vowel in it) lay placidly in her chair, her feet comfortably up, her lovely hands folded, her large, liquid gaze fixed upon the screen where DeeDee Fleming, in the silvery meshes of a technicolor mermaid, swam phlegmatically through seas of pearl-colored mist.

Martin groped in the gloom for a chair. The strangest things were going on inside his brain, where tiny stiles still moved and readjusted until he no longer felt in the least like Nicholas Martin. Who did he feel like, then? What had happened?

He recalled the neurons whose beady little eyes he had fancied he saw staring brightly into, as well as out of, his own. Or had he? The memory was vivid, yet it couldn't be, of course. The answer was perfectly simple and
terribly logical. ENIAC Gamma the Ninety-Third had told him, somewhat ambiguously, just what his ecological experiment involved. Martin had merely been given the optimum reactive pattern of his successful prototype, a man who had most thoroughly controlled his own environment. And ENIAC had told him the man's name, along with several confusing references to other prototypes like an Ivan (who?) and an unnamed Uighur.

The name for Martin's prototype was, of course, Disraeli, Earl of Beaconsfield. Martin had a vivid recollection of George Arliss playing the role. Clever, insolent, eccentric in dress and manner, exuberant, suave, self-controlled, with a strongly perceptive imagination."

"No, no, no!" DeeDee said with a sort of calm impatience. "Be careful, Nick. Some other chair, please. I have my feet on this one."

"T-t-t-t-t," said Raoul St. Cyr, protruding his thick lips and snapping the fingers of an enormous hand as he pointed to a lowly chair against the wall. "Behind me, Martin. Sit down, sit down. Out of our way. Now! Pay attention. Study what I have done to make something great out of your foolish little play. Especially note how I have so cleverly ended the solo by building to five cumulative pratt-falls. Timing is all," he finished. "Now--SILENCE!"

For a man born in the obscure little Balkan country of Mixo-Lydia, Raoul St. Cyr had done very well for himself in Hollywood. In 1939 St. Cyr, growing alarmed at the imminence of war, departed for America, taking with him the print of an unpronounceable Mixo-Lydian film he had made, which might be translated roughly as The Pores In the Face of the Peasant.

With this he established his artistic reputation as a great director, though if the truth were known, it was really poverty that caused The Pores to be so artistically lighted, and simple drunkenness which had made most of the cast act out one of the strangest performances in film history. But critics compared The Pores to a ballet and praised inordinately the beauty of its leading lady, now known to the world as DeeDee Fleming.

DeeDee was so incredibly beautiful that the law of compensation would force one to expect incredible stupidity as well. One was not disappointed. DeeDee's neurons didn't know anything. She had heard of emotions, and under St. Cyr's bullying could imitate a few of them, but other directors had gone mad trying to get through the semantic block that kept DeeDee's mind a calm, unruffled pool possibly three inches deep. St. Cyr merely bellowed. This simple, primordial approach seemed to be the only one that made sense to Summit's greatest investment and top star.

With this whip-hand over the beautiful and brainless DeeDee, St. Cyr quickly rose to the top in Hollywood. He had undoubted talent. He could make one picture very well indeed. He had made it twenty times already, each time starring DeeDee, and each time perfecting his own feudalistic production unit. Whenever anyone disagreed with St. Cyr, he had only to threaten to go over to MGM and take the obedient DeeDee with him, for he had never allowed her to sign a long-term contract and she worked only on a picture-to-picture basis. Even Tolliver Watt knuckled under when St. Cyr voiced the threat of removing DeeDee.

"Sit down, Martin," Tolliver Watt said. He was a tall, lean, hatchet-faced man who looked like a horse being starved because he was too proud to eat hay. With calm, detached omnipotence he inclined his grey-shot head a millimeter, while a faintly pained expression passed fleetingly across his face.

"Highball, please," he said.

A white-clad waiter appeared noiselessly from nowhere and glided forward with a tray. It was at this point that Martin felt the last stiles readjust in his brain, and entirely on impulse he reached out and took the frosted highball glass from the tray. Without observing this the waiter glided on and presented Watt with a gleaming salver full of nothing. Watt and the waiter regarded the tray.

Then their eyes met. There was a brief silence.

"Here," Martin said, replacing the glass. "Much too weak. Get me another, please. I'm reorienting toward a new phase, which means a different optimum," he explained to the puzzled Watt as he readjusted a chair beside the great man and dropped into it. Odd that he had never before felt at ease during rushes. Right now he felt fine. Perfectly at ease. Relaxed.

"Scotch and soda for Mr. Martin," Watt said calmly. "And another for me."

"So, so, so, now we begin," St. Cyr cried impatiently. He spoke into a hand microphone. Instantly the screen on the ceiling flickered noisily and began to unfold a series of rather ragged scenes in which a chorus of mermaids danced on their tails down the street of a little Florida fishing village.

To understand the full loathsomeness of the fate facing Nicholas Martin, it is necessary to view a St. Cyr production. It seemed to Martin that he was watching the most noisome movie ever put upon film. He was conscious that St. Cyr and Watt were stealing rather mystified glances at him. In the dark he put up two fingers and sketched a robot-like grin. Then, feeling sublimely sure of himself, he lit a cigarette and chuckled aloud.

"You laugh?" St. Cyr demanded with instant displeasure. "You do not appreciate great art? What do you know about it, eh? Are you a genius?"
"This," Martin said urbanely, "is the most noisome movie ever put on film."

In the sudden, deathly quiet which followed, Martin flicked ashes elegantly and added, "With my help, you may yet avoid becoming the laughing stock of the whole continent. Every foot of this picture must be junked. Tomorrow bright and early we will start all over, and--"

Watt said quietly, "We're quite competent to make a film out of Angelina Noel, Martin."

"It is artistic!" St. Cyr shouted. "And it will make money, too!"

"Bah, money!" Martin said cunningly. He flicked more ash with a lavish gesture. "Who cares about money? Let Summit worry."

Watt leaned forward to peer searchingly at Martin in the dimness.

"Raoul," he said, glancing at St. Cyr, "I understood you were getting your--ah--your new writers whipped into shape. This doesn't sound to me as if--"

"Yes, yes, yes, yes," St. Cyr cried excitedly. "Whipped into shape, exactly! A brief delirium, eh? Martin, you feel well? You feel yourself?"

Martin laughed with quiet confidence. "Never fear," he said. "The money you spend on me is well worth what I'll bring you in prestige. I quite understand. Our confidential talks were not to be secret from Watt, of course."

"What confidential talks?" bellowed St. Cyr thickly, growing red.

"We need keep nothing from Watt, need we?" Martin went on imperturably. "You hired me for prestige, and prestige you'll get, if you can only keep your big mouth shut long enough. I'll make the name of St. Cyr glorious for you. Naturally you may lose something at the box-office, but it's worth--"

"Pjrzqxgl!" roared St. Cyr in his native tongue, and he lumbered up from the chair, brandishing the microphone in an enormous, hairy hand.

Deftly Martin reached out and twitched it from his grasp.

"Stop the film," he ordered crisply.

It was very strange. A distant part of his mind knew that normally he would never have dared behave this way, but he felt convinced that never before in his life had he acted with complete normality. He glowed with a giddy warmth of confidence that everything he did would be right, at least while the twelve-hour treatment lasted....

* * * * *

The screen flickered hesitantly, then went blank.

"Turn the lights on," Martin ordered the unseen presence beyond the mike. Softly and suddenly the room glowed with illumination. And upon the visages of Watt and St. Cyr he saw a mutual dawning uneasiness begin to break.

He had just given them food for thought. But he had given them more than that. He tried to imagine what moved in the minds of the two men, below the suspicions he had just implanted. St. Cyr's was fairly obvious. The Mixo-Lydian licked his lips--no mean task--and studied Martin with uneasy little bloodshot eyes. Clearly Martin had acquired confidence from somewhere. What did it mean? What secret sin of St. Cyr's had been discovered to him, what flaw in his contract, that he dared behave so defiantly?

Tolliver Watt was a horse of another color; apparently the man had no guilty secrets; but he too looked uneasy. Martin studied the proud face and probed for inner weaknesses. Watt would be a harder nut to crack. But Martin could do it.

"That last underwater sequence," he now said, pursuing his theme. "Pure trash, you know. It'll have to come out. The whole scene must be shot from under water."

"Shut up!" St. Cyr shouted violently.

"But it must, you know," Martin went on. "Or it won't jibe with the new stuff I've written in. In fact, I'm not at all certain that the whole picture shouldn't be shot under water. You know, we could use the documentary technique--"

"Raoul," Watt said suddenly, "what's this man trying to do?"

"He is trying to break his contract, of course," St. Cyr said, turning ruddy olive. "It is the bad phase all my writers go through before I get them whipped into shape. In Mixo-Lydia--"

"Are you sure he'll whip into shape?" Watt asked.

"To me this is now a personal matter," St. Cyr said, glaring at Martin. "I have spent nearly thirteen weeks on this man and I do not intend to waste my valuable time on another. I tell you he is simply trying to break his contract--tricks, tricks, tricks."

"Are you?" Watt asked Martin coldly.

"Not now," Martin said. "I've changed my mind. My agent insists I'd be better off away from Summit. In fact, she has the curious feeling that I and Summit would suffer by a mesalliance. But for the first time I'm not sure I agree. I begin to see possibilities, even in the tripe St. Cyr has been stuffing down the public's throat for years. Of
course I can't work miracles all at once. Audiences have come to expect garbage from Summit, and they've even been conditioned to like it. But we'll begin in a small way to re-educate them with this picture. I suggest we try to symbolize the Existentialist hopelessness of it all by ending the film with a full four hundred feet of seascapes--nothing but vast, heaving stretches of ocean," he ended, on a note of complacent satisfaction.

A vast, heaving stretch of Raoul St. Cyr rose from his chair and advanced upon Martin.

"Outside, outside!" he shouted. "Back to your cell, you double-crossing vermin! I, Raoul St. Cyr, command it. Outside, before I rip you limb from limb--"

Martin spoke quickly. His voice was calm, but he knew he would have to work fast.

"You see, Watt?" he said clearly, meeting Watt's rather startled gaze. "Doesn't dare let you exchange three words with me, for fear I'll let something slip. No wonder he's trying to put me out of here--he's skating on thin ice these days."

Goaded, St. Cyr rolled forward in a ponderous lunge, but Watt interposed. It was true, of course, that the writer was probably trying to break his contract. But there were wheels within wheels here. Martin was too confident, too debonair. Something was going on which Watt did not understand.

"All right, Raoul," he said decisively. "Relax for a minute. I said relax! We don't want Nick here suing you for assault and battery, do we? Your artistic temperament carries you away sometimes. Relax and let's hear what Nick has to say."

"Watch out for him, Tolliver!" St. Cyr cried warningly. "They're cunning, these creatures. Cunning as rats. You never know--"

Martin raised the microphone with a lordly gesture. Ignoring the director, he said commandingly into the mike, "Put me through to the commissary. The bar, please. Yes. I want to order a drink. Something very special. A--ah--a Helena Glinska--"

* * * * *

"Hello," Erika Ashby's voice said from the door. "Nick, are you there? May I come in?"

The sound of her voice sent delicious chills rushing up and down Martin's spine. He swung round, mike in hand, to welcome her. But St. Cyr, pleased at this diversion, roared before he could speak.

"No, no, no, no! Go! Go at once. Whoever you are--out!"

Erika, looking very brisk, attractive and firm, marched into the room and cast at Martin a look of resigned patience.

Very clearly she expected to fight both her own battles and his.

"I'm on business here," she told St. Cyr coldly. "You can't part author and agent like this. Nick and I want to have a word with Mr. Watt."

"Ah, my pretty creature, sit down," Martin said in a loud, clear voice, scrambling out of his chair. "Welcome! I'm just ordering myself a drink. Will you have something?"

Erika looked at him with startled suspicion. "No, and neither will you," she said. "How many have you had already? Nick, if you're drunk at a time like this--"

"And no shilly-shallying," Martin said blandly into the mike. "I want it at once, do you hear? A Helena Glinska, yes. Perhaps you don't know it? Then listen carefully. Take the largest Napoleon you've got. If you haven't a big one, a small punch bowl will do. Fill it half full with ice-cold ale. Got that? Add three jiggers of creme de menthe--"

"Nick, are you mad?" Erika demanded, revolted.


"Miss Ashby, we are very busy," St. Cyr broke in importantly, making shooing motions toward the door. "Not now. Sorry. You interrupt. Go at once."

"--better add six more jiggers of honey," Martin was heard to add contemplatively into the mike. "And then send it over immediately. Drop everything else, and get it here within sixty seconds. There's a bonus for you if you do. Okay? Good. See to it."

He tossed the microphone casually at St. Cyr.

Meanwhile, Erika had closed in on Tolliver Watt.

"I've just come from talking to Gloria Eden," she said, "and she's willing to do a one-picture deal with Summit if I okay it. But I'm not going to okay it unless you release Nick Martin from his contract, and that's flat."

Watt showed pleased surprise.

"Well, we might get together on that," he said instantly, for he was a fan of Miss Eden's and for a long time had yearned to star her in a remake of Vanity Fair. "Why didn't you bring her along? We could have--"

"Nonsense!" St. Cyr shouted. "Do not discuss this matter yet, Tolliver."

"She's down at Laguna," Erika explained. "Be quiet, St. Cyr! I won't--"
A knock at the door interrupted her. Martin hurried to open it and as he had expected encountered a waiter with a tray.

"Quick work," he said urbaneh, accepting the huge, coldly sweating Napoleon in a bank of ice. "Beautiful, isn't it?"

St. Cyr's booming shouts from behind him drowned out whatever remark the waiter may have made as he received a bill from Martin and withdrew, looking nauseated.

"No, no, no, no," St. Cyr was roaring. "Tolliver, we can get Gloria and keep this writer too, not that he is any good, but I have spent already thirteen weeks training him in the St. Cyr approach. Leave it to me. In Mixo-Lydia we handle--"

Erika's attractive mouth was opening and shutting, her voice unheard in the uproar. St. Cyr could keep it up indefinitely, as was well known in Hollywood. Martin sighed, lifted the brimming Napoleon and sniffed delicately as he stepped backward toward his chair. When his heel touched it, he tripped with the utmost grace and savoir-faire, and very deftly emptied the Helena Glinsak, ale, honey, creme de menthe, ice and all, over St. Cyr's capacious front.

St. Cyr's bellow broke the microphone.

* * * * *

Martin had composed his invention carefully. The nauseous brew combined the maximum elements of wetness, coldness, stickiness and pungency.

The drenched St. Cyr, shuddering violently as the icy beverage deluged his legs, snatched out his handkerchief and mopped in vain. The handkerchief merely stuck to his trousers, glued there by twelve jiggers of honey. He reeked of peppermint.

"I suggest we adjourn to the commissary," Martin said fastidiously. "In some private booth we can go on with this discussion away from the--the rather overpowering smell of peppermint."

"In Mixo-Lydia," St. Cyr gasped, sloshing in his shoes as he turned toward Martin, "in Mixo-Lydia we throw to the dogs--we boil in oil--we--"

"And next time," Martin said, "please don't joggle my elbow when I'm holding a Helena Glinska. It's most annoying."

St. Cyr drew a mighty breath, rose to his full height--and then subsided. St. Cyr at the moment looked like a Keystone Kop after the chase sequence, and knew it. Even if he killed Martin now, the element of classic tragedy would be lacking. He would appear in the untenable position of Hamlet murdering his uncle with custard pies.

"Do nothing until I return!" he commanded, and with a final glare at Martin plunged moistly out of the theater.

The door crashed shut behind him. There was silence for a moment except for the soft music from the overhead screen which DeeDee had caused to be turned on again, so that she might watch her own lovely form flicker in dimmed images through pastel waves, while she sang a duet with Dan Dailey about sailors, mermaids and her home in far Atlantis.

"And now," said Martin, turning with quiet authority to Watt, who was regarding him with a baffled expression, "I want a word with you."

"I can't discuss your contract till Raoul gets back," Watt said quickly.

"Nonsense," Martin said in a firm voice. "Why should St. Cyr dictate your decisions? Without you, he couldn't turn out a box-office success if he had to. No, be quiet, Erika. I'm handling this, my pretty creature."

Watt rose to his feet. "Sorry, I can't discuss it," he said. "St. Cyr pictures make money, and you're an inexperien--"

"That's why I see the true situation so clearly," Martin said. "The trouble with you is you draw a line between artistic genius and financial genius. To you, it's merely routine when you work with the plastic medium of human minds, shaping them into an Ideal Audience. You are an ecological genius, Tolliver Watt! The true artist controls his environment, and gradually you, with a master's consummate skill, shape that great mass of living, breathing humanity into a perfect audience...."

"Sorry," Watt said, but not, bruskly. "I really have no time--ah--"

"Your genius has gone long enough unrecognized," Martin said hastily, letting admiration ring in his golden voice. "You assume that St. Cyr is your equal. You give him your own credit titles. Yet in your own mind you must have known that half the credit for his pictures is yours. Was Phidias non-commercial? Was Michaelangelo? Commercialism is simply a label for functionalism, and all great artists produce functional art. The trivial details of Rubens' masterpieces were filled in by assistants, were they not? But Rubens got the credit, not his hirelings. The proof of the pudding's obvious. Why?" Cunningly gauging his listener, Martin here broke off.

"Why?" Watt asked.

"Sit down," Martin urged. "I'll tell you why. St. Cyr's pictures make money, but you're responsible for their
molding into the ideal form, impressing your character-matrix upon everything and everyone at Summit Studios..."

Slowly Watt sank into his chair. About his ears the hypnotic bursts of Disraelian rhodomontade thundered compellingly. For Martin had the man hooked. With unerring aim he had at the first try discovered Watt's weakness—the uncomfortable feeling in a professionally arty town that money-making is a basically contemptible business. Disraeli had handled tougher problems in his day. He had swayed Parliaments.

Watt swayed, tottered—and fell. It took about ten minutes, all in all. By the end of that time, dizzy with eloquent praise of his economic ability, Watt had realized that while St. Cyr might be an artistic genius, he had no business interfering in the plans of an economic genius. Nobody told Watt what to do when economics were concerned.

"You have the broad vision that can balance all possibilities and show the right path with perfect clarity," Martin said glibly. "Very well. You wish Eden. You feel--do you not?--that I am unsuitable material. Only geniuses can change their plans with instantaneous speed.... When will my contract release be ready?"

"What?" said Watt, in a swimming, glorious daze. "Oh. Of course. Hm-m. Your contract release. Well, now--"

"St. Cyr would stubbornly cling to past errors until Summit goes broke," Martin pointed out. "Only a genius like Tolliver Watt strikes when the iron is hot, when he sees a chance to exchange failure for success, a Martin for an Eden."

"Hm-m," Watt said. "Yes. Very well, then." His long face grew shrewd. "Very, well, you get your release--after I've signed Eden."

"There you put your finger on the heart of the matter," Martin approved, after a very brief moment of somewhat dashed thought. "Miss Eden is still undecided. If you left the transaction to somebody like St. Cyr, say, it would be botched. Erika, you have your car here? How quickly could you drive Tolliver Watt to Laguna? He's the only person with the skill to handle this situation."

"What situ--oh, yes. Of course, Nick. We could start right away."

"But--" Watt said.

The Disraeli-matrix swept on into oratorical periods that made the walls ring. The golden tongue played arpeggios with logic.

"I see," the dazed Watt murmured, allowing himself to be shepherded toward the door. "Yes, yes, of course. Then--suppose you drop over to my place tonight, Martin. After I get the Eden signature, I'll have your release prepared. Hm-m. Functional genius...." His voice fell to a low, crooning mutter, and he moved quietly out of the door.

Martin laid a hand on Erika's arm as she followed him.

"Wait a second," he said. "Keep him away from the studio until we get the release. St. Cyr can still out-shout me any time. But he's hooked. We--"

"Nick," Erika said, looking searchingly into his face. "What's happened?"

"Tell you tonight," Martin said insolently. "I can't hear you."

"DeeDee," St. Cyr shouted, whirling toward the lovely star, who hadn't stirred from her rapturous admiration of DeeDee in technicolor overhead. "Where is Tolliver?"

Martin started. He had quite forgotten DeeDee.

"You don't know, do you, DeeDee?" he prompted quickly.

"Shut up," St. Cyr snapped. "Answer me, you--" he added a brisk polysyllable in Mixo-Lydian, with the desired effect. DeeDee wrinkled her flawless brow.

"Tolliver went away, I think. I've got it mixed up with the picture. He went home to meet Nick Martin, didn't he?"

"See?" Martin interrupted, relieved. "No use expecting DeeDee to--"

"But Martin is here!" St. Cyr shouted. "Think, think!"

"Was the contract release in the rushes?" DeeDee asked vaguely.

"A contract release?" St. Cyr roared. "What is this? Never will I permit it, never, never, never! DeeDee, answer
me--where has Watt gone?"

"He went somewhere with that agent," DeeDee said. "Or was that in the rushes too?"

"But where, where, where?"

"They went to Atlantis," DeeDee announced with an air of faint triumph.

"No!" shouted St. Cyr. "That was the picture! The mermaid came from Atlantis, not Watt!"

"Tolliver didn't say he was coming from Atlantis," DeeDee murmured, unruffled. "He said he was going to Atlantis. Then he was going to meet Nick Martin at his house tonight and give him his contract release."

"When?" St. Cyr demanded furiously. "Think, DeeDee? What time did--"

"DeeDee," Martin said, stepping forward with suave confidence, "you can't remember a thing, can you?" But DeeDee was too subnormal to react even to a Disraeli-matrix. She merely smiled placidly at him.

"Out of my way, you writer!" roared St. Cyr, advancing upon Martin. "You will get no contract release! You do not waste St. Cyr's time and get away with it! This I will not endure. I fix you as I fixed Ed Cassidy!"

Martin drew himself up and froze St. Cyr with an insolent smile. His hand toyed with an imaginary monocle. Golden periods were hanging at the end of his tongue. There only remained to hypnotize St. Cyr as he had hypnotized Watt. He drew a deep breath to unlease the floods of his eloquence--

And St. Cyr, also too subhuman to be impressed by urbanity, hit Martin a clout on the jaw.

It could never have happened in the British Parliament.

III

When the robot walked into Martin's office that evening, he, or it, went directly to the desk, unscrewed the bulb from the lamp, pressed the switch, and stuck his finger into the socket. There was a crackling flash. ENIAC withdrew his finger and shook his metallic head violently.

"I needed that," he sighed. "I've been on the go all day, by the Kaldekooz time-scale. Paleolithic, Neolithic, Technological--I don't even know what time it is. Well, how's your ecological adjustment getting on?"

Martin rubbed his chin thoughtfully.

"Badly," he said. "Tell me, did Disraeli, as Prime Minister, ever have any dealings with a country called Mixo-Lydia?"

"I have no idea," said the robot. "Why do you ask?"

"Because my environment hauled back and took a poke at my jaw," Martin said shortly.

"Then you provoked it," ENIAC countered. "A crisis--a situation of stress--always brings a man's dominant trait to the fore, and Disraeli was dominantly courageous. Under stress, his courage became insolence. But he was intelligent enough to arrange his environment so insolence would be countered on the semantic level. Mixo-Lydia, eh? I place it vaguely, some billions of years ago, when it was inhabited by giant white apes. Or--oh, now I remember. It's an encysted medieval survival, isn't it?"

Martin nodded.

"So is this movie studio," the robot said. "Your trouble is that you've run up against somebody who's got a better optimum ecological adjustment than you have. That's it. This studio environment is just emerging from medievalism, so it can easily slip back into that plenum when an optimum medievalist exerts pressure. Such types caused the Dark Ages. Well, you'd better change your environment to a neo-technological one, where the Disraeli matrix can be successfully pro-survival. In your era, only a few archaic social-encystments like this studio are feudalistic, so go somewhere else. It takes a feudalist to match a feudalist."

"But I can't go somewhere else," Martin complained. "Not without my contract release. I was supposed to pick it up tonight, but St. Cyr found out what was happening, and he'll throw a monkey-wrench in the works if he has to knock me out again to do it. I'm due at Watt's place now, but St. Cyr's already there--"

"Spare me the trivia," the robot said, raising his hand. "As for this St. Cyr, if he's a medieval character-type, obviously he'll knuckle under only to a stronger man of his own kind."

"How would Disraeli have handled this?" Martin demanded.

"Disraeli would never have got into such a situation in the first place," the robot said unhelpfully. "The ecologizer can give you the ideal ecological differential, but only for your own type, because otherwise it wouldn't be your optimum. Disraeli would have been a failure in Russia in Ivan's time."

"Would you mind clarifying that?" Martin asked thoughtfully.

"Certainly," the robot said with great rapidity. "It all depends on the threshold-response-time of the memory-circuits in the brain, if you assume the identity of the basic chromosome-pattern. The strength of neuronic activation varies in inverse proportion to the quantitative memory factor. Only actual experience could give you Disraeli's memories, but your reactivity-thresholds have been altered until perception and emotional-indices approximate the Disraeli ratio."

"Oh," Martin said. "But how would you, say, assert yourself against a medieval steam-shovel?"
"By plugging my demountable brain into a larger steam-shovel," ENIAC told him.

* * * * *

Martin seemed pensive. His hand rose, adjusting an invisible monocle, while a look of perceptive imagination suddenly crossed his face.

"You mentioned Russia in Ivan's time," he said. "Which Ivan would that be? Not, by any chance--?"

"Ivan the Fourth. Very well adjusted to his environment he was, too. However, enough of this chit-chat. Obviously you'll be one of the failures in our experiment, but our aim is to strike an average, so if you'll put the ecologizer on your--"

"That was Ivan the Terrible, wasn't it?" Martin interrupted. "Look here, could you impress the character-matrix of Ivan the Terrible on my brain?"

"That wouldn't help you a bit," the robot said. "Besides, it's not the purpose of the experiment. Now--"

"One moment. Disraeli can't cope with a medievalist like St. Cyr on his own level, but if I had Ivan the Terrible's reactive thresholds, I'll bet I could throw a bluff that might do the trick. Even though St. Cyr's bigger than I am, he's got a veneer of civilization ... now wait. He trades on that. He's always dealt with people who are too civilized to use his own methods. The trick would be to call his bluff. And Ivan's the man who could do it."

"But you don't understand."

"Didn't everybody in Russia tremble with fear at Ivan's name?"

"Yes, in--"

"Very well, then," Martin said triumphantly. "You're going to impress the character-matrix of Ivan the Terrible on my mind, and then I'm going to put the bite on St. Cyr, the way Ivan would have done it. Disraeli's simply too civilized. Size is a factor, but character's more important. I don't look like Disraeli, but people have been reacting to me as though I were George Arliss down to the spit-curl. A good big man can always lick a good little man. But St. Cyr's never been up against a really uncivilized little man--one who'd gladly rip out an enemy's heart with his bare hands." Martin nodded briskly. "St. Cyr will back down--I've found that out. But it would take somebody like Ivan to make him stay all the way down."

"If you think I'm going to impress Ivan's matrix on you, you're wrong," the robot said.

"You couldn't be talked into it?"

"I," said ENIAC, "am a robot, semantically adjusted. Of course you couldn't talk me into it."

Perhaps not, Martin reflected, but Disraeli reflected, but Disraeli--hm-m. "Man is a machine." Why, Disraeli was the one person in the world ideally fitted for robot-coercion. To him, men were machines--and what was ENIAC?

"Let's talk this over--" Martin began, absently pushing the desk-lamp toward the robot. And then the golden tongue that had swayed empires was loosed....

"You're not going to like this," the robot said dazedly, sometime later. "Ivan won't do at ... oh, you've got me all confused. You'll have to eyeprint--" He began to pull out of his sack the helmet and the quarter-mile of red ribbon.

"To tie up my bonny grey brain," Martin said, drunk with his own rhetoric. "Put it on my head. That's right. Ivan the Terrible, remember. I'll fix St. Cyr's Mixo-Lydian wagon."

"Differential depends on environment as much as on heredity," the robot muttered, clapping the helmet on Martin's head. "Though naturally Ivan wouldn't have had the Tsardom environment without his particular heredity, involving Helena Glinska--there!" He removed the helmet.

"But nothing's happening," Martin said. "I don't feel any different."

"It'll take a few moments. This isn't your basic character-pattern, remember, as Disraeli's was. Enjoy yourself while you can. You'll get the Ivan-effect soon enough." He shouldered the sack and headed uncertainly for the door.

"Wait," Martin said uneasily. "Are you sure--"

"Be quiet. I forgot something--some formality--now I'm all confused. Well, I'll think of it later, or earlier, as the case may be. I'll see you in twelve hours--I hope."

The robot departed. Martin shook his head tentatively from side to side. Then he got up and followed ENIAC to the door. But there was no sign of the robot, except for a diminishing whirlwind of dust in the middle of the corridor. Something began to happen in Martin's brain....

Behind him, the telephone rang.

Martin heard himself gasp with pure terror. With a sudden, impossible, terrifying, absolute certainty he knew who was telephoning.

Assassins!

* * * * *

"Yes, Mr. Martin," said Tolliver Watt's butler to the telephone. "Miss Ashby is here. She is with Mr. Watt and Mr. St. Cyr at the moment, but I will give her your message. You are detained. And she is to call for you--where?"

"The broom-closet on the second floor of the Writers' Building," Martin said in a quavering voice. "It's the only
one near a telephone with a long enough cord so I could take the phone in here with me. But I'm not at all certain that I'm safe. I don't like the looks of that broom on my left."

"Sir?"
"Are you sure you're Tolliver Watt's butler?" Martin demanded nervously.
"Quite sure, Mr.--eh--Mr. Martin."
"I am Mr. Martin," cried Martin with terrified defiance. "By all the laws of God and man, Mr. Martin I am and Mr. Martin I will remain, in spite of all attempts by rebellious dogs to depose me from my rightful place."
"Yes, sir. The broom-closet, you say, sir?"
"The broom-closet. Immediately. But swear not to tell another soul, no matter how much you're threatened. I'll protect you."
"Very well, sir. Is that all?"
"Yes. Tell Miss Ashby to hurry. Hang up now. The line may be tapped. I have enemies."
There was a click. Martin replaced his own receiver and furtively surveyed the broom-closet. He told himself that this was ridiculous. There was nothing to be afraid of, was there? True, the broom-closet's narrow walls were closing in upon him alarmingly, while the ceiling descended....

Panic-stricken, Martin emerged from the closet, took a long breath, and threw back his shoulders. "N-not a thing to be afraid of," he said. "Who's afraid?" Whistling, he began to stroll down the hall toward the staircase, but midway agoraphobia overcame him, and his nerve broke.

He ducked into his own office and sweated quietly in the dark until he had mustered up enough courage to turn on a lamp.

The Encyclopedia Britannica, in its glass-fronted cabinet, caught his eye. With noiseless haste, Martin secured ITALY to LORD and opened the volume at his desk. Something, obviously, was very, very wrong. The robot had said that Martin wasn't going to like being Ivan the Terrible, come to think of it. But was Martin wearing Ivan's character-matrix? Perhaps he'd got somebody else's matrix by mistake--that of some arrant coward. Or maybe the Mad Tsar of Russia had really been called Ivan the Terrified. Martin flipped the rustling pages nervously. Ivan, Ivan--here it was.

Son of Helena Glinska ... married Anastasia Zakharina-Koshkina ... private life unspeakably abominable ... memory astonishing, energy indefatigable, ungovernable fury--great natural ability, political foresight, anticipated the ideals of Peter the Great--Martin shook his head.

Then he caught his breath at the next line.
Ivan had lived in an atmosphere of apprehension, imagining that every man's hand was against him.
"Just like me," Martin murmured. "But--but there was more to Ivan than just cowardice. I don't understand."
"Differential," the robot had said, "depends on environment as much as on heredity. Though naturally Ivan wouldn't have had the Tsardom environment without his particular heredity."

Martin sucked in his breath sharply. Environment does make a difference. No doubt Ivan IV had been a fearful coward, but heredity plus environment had given Ivan the one great weapon that had enabled him to keep his cowardice a recessive trait.

Ivan the Terrible had been Tsar of all the Russias.

Give a coward a gun, and, while he doesn't stop being a coward, it won't show in the same way. He may act like a violent, aggressive tyrant instead. That, of course, was why Ivan had been ecologically successful--in his specialized environment. He'd never run up against many stresses that brought his dominant trait to the fore. Like Disraeli, he had been able to control his environment so that such stresses were practically eliminated.

Martin turned green.
Then he remembered Erika. Could he get Erika to keep St. Cyr busy, somehow, while he got his contract release from Watt? As long as he could avoid crises, he could keep his nerve from crumbling, but--there were assassins everywhere!

Erika was on her way to the lot by now. Martin swallowed.
He would meet her outside the studio. The broom-closet wasn't safe. He could be trapped there like a rat--
"Nonsense," Martin told himself with shivering firmness. "This isn't me. All I have to do is get a g-grip on m-myself. Come, now. Buck up. Toujours l'audace!"

But he went out of his office and downstairs very softly and cautiously. After all, one never knew. And when every man's hand was against one....
Quaking, the character-matrix of Ivan the Terrible stole toward a studio gate.

* * * * *
The taxi drove rapidly toward Bel-Air.
"But what were you doing up that tree?" Erika demanded.
Martin shook violently.
"A werewolf," he chattered. "And a vampire and a ghoul and--I saw them, I tell you. There I was at the studio gate, and they all came at me in a mob."

"But they were just coming back from dinner," Erika said. "You know Summit's doing night shooting on Abbott and Costello Meet Everybody. Karloff wouldn't hurt a fly."

"I kept telling myself that," Martin said dully, "but I was out of my mind with guilt and fear. You see, I'm an abominable monster. But it's not my fault. It's environmental. I grew up in brutal and degrading conditions--oh, look!" He pointed toward a traffic cop ahead. "The police! Traitors even in the palace guards!"

"Lady, is that guy nuts?" the cabbie demanded.

"Mad or sane, I am Nicholas Martin," Martin announced, with an abrupt volte face. He tried to stand up commandingly, bumped his head, screamed "Assassins!" and burrowed into a corner of the seat, panting horribly.

Erika gave him a thoughtful, worried look.

"Nick," she said, "How much have you had to drink? What's wrong?"

Martin shut his eyes and lay back against the cushions.

"Let me have a few minutes, Erika," he pleaded. "I'll be all right as soon as I recover from stress. It's only when I'm under stress that Ivan--"

"You can accept your contract release from Watt, can't you? Surely you'll be able to manage that."

"Of course," Martin said with feeble bravery. He thought it over and reconsidered. "If I can hold your hand," he suggested, taking no chances.

This disgusted Erika so much that for two miles there was no more conversation within the cab.

Erika had been thinking her own thoughts.

"You've certainly changed since this morning," she observed. "Threatening to make love to me, of all things. As if I'd stand for it. I'd like to see you try." There was a pause. Erika slid her eyes sidewise toward Martin. "I said I'd like to see you try," she repeated.

"Oh, you would, would you?" Martin said with hollow valor. He paused. Oddly enough his tongue, hitherto frozen stiff on one particular subject in Erika's presence, was now thoroughly loosened. Martin wasted no time on theory. Seizing his chance before a new stress might unexpectedly arise, he instantly poured out his heart to Erika, who visibly softened.

"But why didn't you ever say so before?" she asked.

"I can't imagine," Martin said. "Then you'll marry me?"

"But why were you acting so--"

"Will you marry me?"

"Yes," Erika said, and there was a pause. Martin moistened his lips, discovering that somehow he and Erika had moved close together. He was about to seal the bargain in the customary manner when a sudden thought struck him and made him draw back with a little start.

Erika opened her eyes.

"Ah--" said Martin. "Um. I just happened to remember. There's a bad flu epidemic in Chicago. Epidemics spread like wildfire, you know. Why, it could be in Hollywood by now--especially with the prevailing westerly winds."

"I'm damned if I'm going to be proposed to and not kissed," Erika said in a somewhat irritated tone. "You kiss me!"

"But I might give you bubonic plague," Martin said nervously. "Kissing spreads germs. It's a well-known fact."

"Nick!"

"Well--I don't know--when did you last have a cold?"

Erika pulled away from him and went to sit in the other corner.

"Ah," Martin said, after a long silence. "Erika?"

"Don't talk to me, you miserable man," Erika said. "You monster, you."

"I can't help it," Martin cried wildly. "I'll be a coward for twelve hours. It's not my fault. After eight tomorrow morning I'll--I'll walk into a lion-cage if you want, but tonight I'm as yellow as Ivan the Terrible! At least let me tell you what's been happening."

Erika said nothing, Martin instantly plunged into his long and improbable tale.

"I don't believe a word of it," Erika said, when he had finished. She shook her head sharply. "Just the same, I'm still your agent, and your career's still my responsibility. The first and only thing we have to do is get your contract release from Tolliver Watt. And that's all we're going to consider right now, do you hear?"

"But St. Cyr--"

"I'll do all the talking. You won't have to say a word. If St. Cyr tries to bully you, I'll handle him. But you've got
to be there with me, or St. Cyr will make that an excuse to postpone things again. I know him."

"Now I'm under stress again," Martin said wildly. "I can't stand it. I'm not the Tsar of Russia."

"Lady," said the cab-driver, looking back, "if I was you, I'd sure as hell break off that engagement."

"Heads will roll for this," Martin said ominously.

* * * * *

"By mutual consent, agree to terminate ... yes," Watt said, affixing his name to the legal paper that lay before him on the desk. "That does it. But where in the world is that fellow Martin? He came in with you, I'm certain."

"Did he?" Erika asked, rather wildly. She too, was wondering how Martin had managed to vanish so miraculously from her side. Perhaps he had crept with lightning rapidity under the carpet. She forced her mind from the thought and reached for the contract release Watt was folding.

"Wait," St. Cyr said, his lower lip jutting. "What about a clause giving us an option on Martin's next play?"

Watt paused, and the director instantly struck home.

"Whatever it may be, I can turn it into a vehicle for DeeDee, eh, DeeDee?" He lifted a sausage finger at the lovely star, who nodded obediently.

"He's going to have an all-male cast," Erika said hastily. "And we're discussing contract releases, not options."

"He would give me an option if I had him here," St. Cyr growled, torturing his cigar horribly. "Why does everything conspire against an artist?" He waved a vast, hairy fist in the air. "Now I must break in a new writer, which is a great waste. Within a fortnight Martin would have been a St. Cyr writer. In fact, it is still possible."

"I'm afraid not, Raoul," Watt said resignedly. "You really shouldn't have hit Martin at the studio today."

"But--but he would not dare charge me with assault. In Mixo-Lydia--"

"Why, hello, Nick," DeeDee said, with a bright smile. "What are you hiding behind those curtains for?"

Every eye was turned toward the window draperies, just in time to see the white, terrified face of Nicholas Martin flip out of sight like a scared chipmunk's. Erika, her heart dropping, said hastily, "Oh, that isn't Nick. It doesn't look a bit like him. You made a mistake, DeeDee."

"Did I?" DeeDee asked, perfectly willing to agree.

"Certainly," Erika said, reaching for the contract release in Watt's hand. "Now if you'll just let me have this, I'll--"

"Stop!" cried St. Cyr in a bull's bellow. Head sunk between his heavy shoulders, he lumbered to the window and jerked the curtains aside.

"Ha!" the director said in a sinister voice. "Martin."

"It's a lie," Martin said feebly, making a desperate attempt to conceal his stress-triggered panic. "I've abdicated."

St. Cyr, who had stepped back a pace, was studying Martin carefully. Slowly the cigar in his mouth began to tilt upwards. An unpleasant grin widened the director's mouth.

He shook a finger under Martin's quivering nostrils.

"You!" he said. "Tonight it is a different tune, eh? Today you were drunk. Now I see it all. Valorous with pots, like they say."

"Nonsense," Martin said, rallying his courage by a glance at Erika. "Who say? Nobody but you would say a thing like that. Now what's this all about?"

"What were you doing behind that curtain?" Watt asked.

"I wasn't behind the curtain," Martin, with great bravado. "You were. All of you. I was in front of the curtain. Can I help it if the whole lot of you conceal yourselves behind curtains in a library, like--like conspirators?"

The word was unfortunately chosen. A panicky light flashed into Martin's eyes. "Yes, conspirators," he went on nervously. "You think I don't know, eh? Well, I do. You're all assassins, plotting and planning. So this is your headquarters, is it? All night your hired dogs have been at my heels, driving me like a wounded caribou to--"

"We've got to be going," Erika said desperately. "There's just time to catch the next carib--the next plane east."

She reached for the contract release, but Watt suddenly put it in his pocket. He turned his chair toward Martin.

"Will you give us an option on your next play?" he demanded.

"Of course he will give us an option!" St. Cyr said, studying Martin's air of bravado with an experienced eye. "Also, there is to be no question of a charge of assault, for, if there is I will beat you. So it is in Mixo-Lydia. In fact, you do not even want a release from your contract, Martin. It is all a mistake. I will turn you into a St. Cyr writer, and all will be well. So. Now you will ask Tolliver to tear up that release, will you not--ha?"

"Of course you won't, Nick," Erika cried. "Say so!"

* * * * *

There was a pregnant silence. Watt watched with sharp interest. So did the unhappy Erika, torn between her responsibility as Martin's agent and her disgust at the man's abject cowardice. DeeDee watched too, her eyes very
wide and a cheerful smile upon her handsome face. But the battle was obviously between Martin and Raoul St. Cyr.

Martin drew himself up desperately. Now or never he must force himself to be truly Terrible. Already he had a troubled expression, just like Ivan. He strove to look sinister too. An enigmatic smile played around his lips. For an instant he resembled the Mad Tsar of Russia, except, of course, that he was clean-shaven. With contemptuous, regal power Martin stared down the Mixo-Lydian.

"You will tear up that release and sign an agreement giving us option on your next play too, ha?" St. Cyr said--but a trifle uncertainly.

"I'll do as I please," Martin told him. "How would you like to be eaten alive by dogs?"

"I don't know, Raoul," Watt said. "Let's try to get this settled even if--"

"Do you want me to go over to Metro and take DeeDee with me?" St. Cyr cried, turning toward Watt. "He will sign!" And, reaching into an inner pocket for a pen, the burly director swung back toward Martin.

"Assassin!" cried Martin, misinterpreting the gesture.

A gloating smile appeared on St. Cyr's revolting features.

"Now we have him, Tolliver," he said, with heavy triumph, and these ominous words added the final stress to Martin's overwhelming burden. With a mad cry he rushed past St. Cyr, wrenched open a door, and fled.

From behind him came Erika's Valkyrie voice.

"Leave him alone! Haven't you done enough already? Now I'm going to get that contract release from you before I leave this room, Tolliver Watt, and I warn you, St. Cyr, if you--"

But by then Martin was five rooms away, and the voice faded. He darted on, hopelessly trying to make himself slow down and return to the scene of battle. The pressure was too strong. Terror hurled him down a corridor, into another room, and against a metallic object from which he rebounded, to find himself sitting on the floor looking up at ENIAC Gamma the Ninety-Third.

"Ah, there you are," the robot said. "I've been searching all over space-time for you. You forgot to give me a waiver of responsibility when you talked me into varying the experiment. The Authorities would be in my gears if I didn't bring back an eyeprinted waiver when a subject's scratched by variance."

With a frightened glance behind him, Martin rose to his feet.

"What?" he asked confusedly. "Listen, you've got to change me back to myself. Everyone's trying to kill me. You're just in time. I can't wait twelve hours. Change me back to myself, quick!"

"Oh, I'm through with you," the robot said callously. "You're no longer a suitably unconditioned subject, after that last treatment you insisted on. I should have got the waiver from you then, but you got me all confused with Disraeli's oratory. Now here. Just hold this up to your left eye for twenty seconds."

He extended a flat, glittering little metal disk. "It's already sensitized and filled out. It only needs your eyeprint. Affix it, and you'll never see me again."

Martin shrank away.

"But what's going to happen to me?" he quavered, swallowing.

"How should I know? After twelve hours, the treatment will wear off, and you'll be yourself again. Hold this up to your eye, now."

"I will if you'll change me back to myself," Martin haggled.

"I can't. It's against the rules. One variance is bad enough, even with a filed waiver, but two? Oh, no. Hold this up to your left eye--"

"No," Martin said with feeble firmness. "I won't."

ENIAC studied him.

"Yes, you will," the robot said finally, "or I'll go boo at you."

Martin paled slightly, but he shook his head in desperate determination.

"No," he said doggedly. "Unless I get rid of Ivan's matrix right now, Erika will never marry me and I'll never get my contract release from Watt. All you have to do is put that helmet on my head and change me back to myself. Is that too much to ask?"

"Certainly, of a robot," ENIAC said stiffly. "No more shilly-shallying. It's lucky you are wearing the Ivan-matrix, so I can impose my will on you. Put your eyeprint on this. Instantly!"

Martin rushed behind the couch and hid. The robot advanced menacingly. And at that moment, pushed to the last ditch, Martin suddenly remembered something.

He faced the robot.

"Wait," he said. "You don't understand. I can't eyeprint that thing. It won't work on me. Don't you realize that? It's supposed to take the eyeprint--"

"--of the rod-and-cone pattern of the retina," the robot said. "So--"
"So how can it do that unless I can keep my eye open for twenty seconds? My perceptive reaction-thresholds are Ivan's aren't they? I can't control the reflex of blinking. I've got a coward's synapses. And they'd force me to shut my eyes tight the second that gimmick got too close to them."

"Hold them open," the robot suggested. "With your fingers."

"My fingers have reflexes too," Martin argued, moving toward a sideboard. "There's only one answer. I've got to get drunk. If I'm half stupefied with liquor, my reflexes will be so slow I won't be able to shut my eyes. And don't try to use force, either. If I dropped dead with fear, how could you get my eyeprint then?"

"Very easily," the robot said. "I'd pry open your lids--"

Martin hastily reached for a bottle on the sideboard, and a glass. But his hand swerved aside and gripped, instead, a siphon of soda water.

"--only," ENIAC went on, "the forgery might be detected."

Martin fizzled the glass full of soda and took a long drink.

"I won't be long getting drunk," he said, his voice thickening. "In fact, it's beginning to work already. See? I'm coöperating."

The robot hesitated.

"Well, hurry up about it," he said, and sat down.

Martin, about to take another drink, suddenly paused, staring at ENIAC. Then, with a sharply indrawn breath, he lowered the glass.

"What's the matter now?" the robot asked. "Drink your--what is it?"

"It's whiskey," Martin told the inexperienced automaton, "but now I see it all. You've put poison in it. So that's your plan, is it? Well, I won't touch another drop, and now you'll never get my eyeprint. I'm no fool."

"Cog Almighty," the robot said, rising. "You poured that drink yourself. How could I have poisoned it? Drink!"

"I won't," Martin said, with a coward's stubbornness, fighting back the growing suspicion that the drink might really be toxic.

"You swallow that drink," ENIAC commanded, his voice beginning to quiver slightly. "It's perfectly harmless." "Then prove it!" Martin said cunningly. "Would you be willing to switch glasses? Would you drink this poisoned brew yourself?"

"How do you expect me to drink?" the robot demanded. "I--" He paused. "All right, hand me the glass," he said. "I'll take a sip. Then you've got to drink the rest of it."

"Aha!" Martin said. "You betrayed yourself that time. You're a robot. You can't drink, remember? Not the same way that I can, anyhow. Now I've got you trapped, you assassin. There's your brew." He pointed to a floor-lamp. "Do you dare to drink with me now, in your electrical fashion, or do you admit you are trying to poison me? Wait a minute, what am I saying? That wouldn't prove a--"

"Of course it would," the robot said hastily. "You're perfectly right, and it's very cunning of you. We'll drink together, and that will prove your whiskey's harmless--so you'll keep on drinking till your reflexes slow down, see?"

"Well," Martin began uncertainly, but the unscrupulous robot unscrewed a bulb from the floor lamp, pulled the switch, and inserted his finger into the empty socket, which caused a crackling flash. "There," the robot said. "It isn't poisoned, see?"

"You're not swallowing it," Martin said suspiciously. "You're holding it in your mouth--I mean your finger."

ENIAC again probed the socket.

"Well, all right, perhaps," Martin said, in a doubtful fashion. "But I'm not going to risk your slipping a powder in my liquor, you traitor. You're going to keep up with me, drink for drink, until I can eyeprint that gimmick of yours--or else I stop drinking. But does sticking your finger in that lamp really prove my liquor isn't poisoned? I can't quite--"

"Of course it does," the robot said quickly. "I'll prove it. I'll do it again ... f(t). Powerful DC, isn't it? Certainly it proves it. Keep drinking, now."

* * * * *

His gaze watchfully on the robot, Martin lifted his glass of club soda.

"F ff ff f(t)!" cried the robot, some time later, sketching a singularly loose smile on its metallic face.

"Best fermented mammoth's milk I ever tasted," Martin agreed, lifting his tenth glass of soda-water. He felt slightly queasy and wondered if he might be drowning.

"Mammoth's milk?" asked ENIAC thickly. "What year is this?"

Martin drew a long breath. Ivan's capacious memory had served him very well so far. Voltage, he recalled, increased the frequency of the robot's thought-patterns and disorganized ENIAC's memory--which was being proved before his eyes. But the crux of his plan was yet to come....

"The year of the great Hairy One, of course," Martin said briskly. "Don't you remember?"
"Then you--" ENIAC strove to focus upon his drinking-companion. "You must be Mammoth-Slayer."
"That's it!" Martin cried. "Have another jolt. What about giving me the treatment now?"
"What treatment?"

Martin looked impatient. "You said you were going to impose the character-matrix of Mammoth-Slayer on my
mind. You said that would insure my optimum ecological adjustment in this temporal phase, and nothing else
would."
"Did I? But you're not Mammoth-Slayer," ENIAC said confusedly. "Mammoth-Slayer was the son of the Great
Hairy One. What's your mother's name?"

"The Great Hairy One," Martin replied, at which the robot grated its hand across its gleaming forehead.
"Have one more jolt," Martin suggested. "Now take out the ecologizer and put it on my head."
"Like this?" ENIAC asked, obeying. "I keep feeling I've forgotten something important. F(t)."

Martin adjusted the crystal helmet on his skull. "Now," he commanded. "Give me the character-matrix of
Mammoth-Slayer, son of the Great Hairy One."
"Well--all right," ENIAC said dizzily. The red ribbons swirled. There was a flash from the helmet. "There," the
robot said. "It's done. It may take a few minutes to begin functioning, but then for twelve hours you'll--wait! Where
are you going?"

But Martin had already departed.

The robot stuffed the helmet and the quarter-mile of red ribbon back for the last time. He lurched to the floor-
lamp, muttering something about one for the road. Afterward, the room lay empty. A fading murmur said, "F(t)."

* * * * *

"Nick!" Erika gasped, staring at the figure in the doorway. "Don't stand like that! You frighten me!"

Everyone in the room looked up abruptly at her cry, and so were just in time to see a horrifying change take
place in Martin's shape. It was an illusion, of course, but an alarming one. His knees slowly bent until he was half-
crouching, his shoulders slumped as though bowed by the weight of enormous back and shoulder muscles, and his
arms swung forward until their knuckles hung perilously near the floor.

Nicholas Martin had at last achieved a personality whose ecological norm would put him on a level with Raoul
St. Cyr.

"Nick!" Erika quavered.

Slowly Martin's jaw protruded till his lower teeth were hideously visible. Gradually his eyelids dropped until he
was peering up out of tiny, wicked sockets. Then, slowly, a perfectly shocking grin broadened Mr. Martin's mouth.
"Erika," he said throatily. "Mine!"
And with that, he shambled forward, seized the horrified girl in his arms, and bit her on the ear.
"Oh, Nick," Erika murmured, closing her eyes. "Why didn't you ever--no, no, no! Nick! Stop it! The contract
release. We've got to--Nick, what are you doing?" She snatched at Martin's departing form, but too late.

For all his ungainly and unpleasant gait, Martin covered ground fast. Almost instantly he was clambering over
Watt's desk as the most direct route to that startled tycoon. DeeDee looked on, a little surprised. St. Cyr lunged
forward.

"In Mixo-Lydia--" he began. "Ha! So!" He picked up Martin and threw him across the room.

"Oh, you beast," Erika cried, and flung herself upon the director, beating at his brawny chest. On second
thought, she used her shoes on his shins with more effect. St. Cyr, no gentleman, turned her around, pinioned her
arms behind her, and glanced up at Watt's alarmed cry.

"Martin! What are you doing?"

There was reason for his inquiry. Apparently unhurt by St. Cyr's toss, Martin had hit the floor, rolled over and
over like a ball, knocked down a floor-lamp with a crash, and uncurled, with an unpleasant expression on his face. He
rose crouching, bandy-legged, his arms swinging low, a snarl curling his lips.

"You take my mate?" the pithecanthropic Mr. Martin inquired throatily, rapidly losing all touch with the
twentieth century. It was a rhetorical question. He picked up the lamp-standard--he did not have to bend to do it--
tore off the silk shade as he would have peeled foliage from a tree-limb, and balanced the weapon in his hand. Then
he moved forward, carrying the lamp-standard like a spear.

"I," said Martin, "kill."

He then endeavored, with the most admirable single-heartedness, to carry out his expressed intention. The first
thrust of the blunt, improvised spear rammed into St. Cyr's solar plexus and drove him back against the wall with a
booming thud. This seemed to be what Martin wanted. Keeping one end of his spear pressed into the director's belly,
he crouched lower, dug his toes into the rug, and did his very best to drill a hole in St. Cyr.

"Stop it!" cried Watt, flinging himself into the conflict. Ancient reflexes took over. Martin's arm shot out. Watt
shot off in the opposite direction.
The lamp broke.

Martin looked pensively at the pieces, tentatively began to bite one, changed his mind, and looked at St. Cyr instead. The gasping director, mouthing threats, curses and objections, drew himself up, and shook a huge fist at Martin.

"I," he announced, "shall kill you with my bare hands. Then I go over to MGM with DeeDee. In Mixo-Lydia--"

Martin lifted his own fists toward his face. He regarded them. He unclenched them slowly, while a terrible grin spread across his face. And then, with every tooth showing, and with the hungry gleam of a mad tiger in his tiny little eyes, he lifted his gaze to St. Cyr's throat.

Mammoth-Slayer was not the son of the Great Hairy One for nothing.

* * * * *

Martin sprang.

So did St. Cyr--in another direction, screaming with sudden terror. For, after all, he was only a medievalist. The feudal man is far more civilized than the so-called man of Mammoth-Slayer's primordially direct era, and as a man recoils from a small but murderous wildcat, so St. Cyr fled in sudden civilized horror from an attacker who was, literally, afraid of nothing.

He sprang through the window and, shrieking, vanished into the night.

Martin was taken by surprise. When Mammoth-Slayer leaped at an enemy, the enemy leaped at him too, and so Martin's head slammed against the wall with disconcerting force. Dimly he heard diminishing, terrified cries. Laboriously he crawled to his feet and set back against the wall, snarling, quite ready....

"Nick!" Erika's voice called. "Nick, it's me! Stop it! Stop it! DeeDee--"

"'Ugh?'" Martin said thickly, shaking his head. "Kill." He growled softly, blinking through red-rimmed little eyes at the scene around him. It swam back slowly into focus. Erika was struggling with DeeDee near the window.

"You let me go," DeeDee cried. "Where Raoul goes, I go."

"DeeDee!" pleaded a new voice. Martin glanced aside to see Tolliver Watt crumpled in a corner, a crushed lamp-shade half obscuring his face.

With a violent effort Martin straightened up. Walking upright seemed unnatural, somehow, but it helped submerge Mammoth-Slayer's worst instincts. Besides, with St. Cyr gone, stresses were slowly subsiding, so that Mammoth-Slayer's dominant trait was receding from the active foreground.

Martin tested his tongue cautiously, relieved to find he was still capable of human speech.

"Uh," he said. "Arrgh ... ah. Watt."

Watt blinked at him anxiously through the lamp-shade.

"Urgh ... Ur--release," Martin said, with a violent effort. "Contract release. Gimme."

Watt had courage. He crawled to his feet, removing the lamp-shade.

"Contract release!" he snapped. "You madman! Don't you realize what you've done? DeeDee's walking out on me. DeeDee, don't go. We will bring Raoul back--"

"Raoul told me to quit if he quit," DeeDee said stubbornly.

"You don't have to do what St. Cyr tells you," Erika said, hanging onto the struggling star.

"Don't I?" DeeDee asked, astonished. "Yes, I do. I always have."

"DeeDee," Watt said frantically, "I'll give you the finest contract on earth--a ten-year contract--look, here it is." He tore out a well-creased document. "All you have to do is sign, and you can have anything you want. Wouldn't you like that?"

"Oh, yes," DeeDee said. "But Raoul wouldn't like it." She broke free from Erika.

"Martin!" Watt told the playwright frantically, "Get St. Cyr back. Apologize to him. I don't care how, but get him back! If you don't, I--I'll never give you your release."

Martin was observed to slump slightly--perhaps with hopelessness. Then, again, perhaps not.

"I'm sorry," DeeDee said. "I liked working for you, Tolliver. But I have to do what Raoul says, of course." And she moved toward the window.

Martin had slumped further down, till his knuckles quite brushed the rug. His angry little eyes, glowing with baffled rage, were fixed on DeeDee. Slowly his lips peeled back, exposing every tooth in his head.

"You," he said, in an ominous growl.

DeeDee paused, but only briefly.

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Then the enraged roar of a wild beast reverberated through the room. "You come back!" bellowed the infuriated Mammoth-Slayer, and with one agile bound sprang to the window, seized DeeDee and slung her under one arm. Wheeling, he glared jealously at the shrinking Watt and reached for Erika. In a trice he had the struggling forms of both girls captive, one under each arm. His wicked little eyes glanced from one to another. Then, playing no
favorites, he bit each quickly on the ear.
"Nick!" Erika cried. "How dare you!"
"Mine," Mammoth-Slayer informed her hoarsely.
"You bet I am," Erika said, "but that works both ways. Put down that hussy you've got under your other arm."
Mammoth-Slayer was observed to eye DeeDee doubtfully.
"Well," Erika said tartly, "make up your mind."
"Both," said the uncivilized playwright. "Yes."
"No!" Erika said.
"Yes," DeeDee breathed in an entirely new tone. Limp as a dishrag, the lovely creature hung from Martin's arm and gazed up at her captor with idolatrous admiration.
"Oh, you hussy," Erika said. "What about St. Cyr?"
"Him," DeeDee said scornfully. "He hasn't got a thing, the sissy. I'll never look at him again." She turned her adoring gaze back to Martin.
Both Watt and DeeDee remained motionless, staring at Martin.
"You," he said, thrusting a finger at DeeDee. "You stay with him. Ha?" He indicated Watt.
DeeDee nodded in slavish adoration.
"You sign contract?"
Nod.
Martin looked significantly into Watt's eyes. He extended his hand.
"The contract release," Erika explained, upside-down. "Give it to him before he pulls your head off."
Slowly Watt pulled the contract release from his pocket and held it out. But Martin was already shambling toward the window. Erika reached back hastily and snatched the document.
"That was a wonderful act," she told Nick, as they reached the street. "Put me down now. We can find a cab some--"
He attempted to climb a palm tree, changed his mind, and shambled on, carrying the now pensive Erika. But it was not until a police car drove past that Erika screamed....
* * * * *
"I'll bail you out tomorrow," Erika told Mammoth-Slayer, struggling between two large patrolmen.
Her words were drowned in an infuriated bellow.
Thereafter events blurred, to solidify again for the irate Mammoth-Slayer only when he was thrown in a cell, where he picked himself up with a threatening roar. "I kill!" he announced, seizing the bars.
"Arrgh!"
"Two in one night," said a bored voice, moving away outside. "Both in Bel-Air, too. Think they're hopped up? We couldn't get a coherent story out of either one."
The bars shook. An annoyed voice from one of the bunks said to shut up, and added that there had been already enough trouble from nincompoops without--here it paused, hesitated, and uttered a shrill, sharp, piercing cry.
Silence prevailed, momentarily, in the cell-block as Mammoth-Slayer, son of the Great Hairy One, turned slowly to face Raoul St. Cyr.
Captain Winfree, straight in his scarlet-trimmed winter greens, tapped the toe of one boot with his swaggerstick. "With all respect, sir," he said, "I feel that if we do no more than hold the line, we're lending moral comfort to the foes of prosperity. Attack! That's my battle-plan, sir. Attack! And attack again!"

Major Dampfer, seated behind Winfree's desk, stretched out his legs and sighed. "You younger officers, men who've never in your lives tasted defeat, are an inspiration and a trial to us old field-graders," he said. "Captain, a project that failed could set your District back fifteen years."

"I realize that, sir," Winfree said. "I'm placing my career in the balance. If I attempt this, and goof, ship me to the sticks, Major. I'd rather spend the rest of my BSG years as a corporal, a simple Potlatch Observer in a downstate village, than never to have embarked on this campaign."

"Young Napoleon must have been very like you, Winfree," Major Dampfer mused. "Very well, lad. Brief me."

"Yes, sir!" Captain Winfree marched over to the giant calendar that covered one wall of his office and tapped his stick against the three dates circled in red. "We've established this triangle of strong-points," he said. "We control the second Sunday in May and the third Sunday in June in addition to our first and most vital holding, the twenty-fifth of December. I regard these three victories, sir, as only beachheads, only the softening-up phases of a still greater campaign. We must press on toward Total Prosperity."

"How, Winfree?" Major Dampfer asked.

"By adding three hundred and sixty-two days a year to our laurels, sir," Winfree said, sweeping his swaggerstick across the face of the calendar. "My plan is to make every consumer's birthday a Gratuity Day for each of his Nearest-and-Dearest."

Major Dampfer sat up straight. "Captain," he said softly, "this is Thinking Big. This could lend billions a year to the Gross National Product. It could mean a major break-through on the Prosperity front. Are you really proposing that each consumer be required to give birthday presents to the same people, and on the same scale, as he now gives Xmas Gratuities?"

"Precisely, sir," Captain Winfree said. "My staff has in the files the birthdate of every consumer in the District. Enforcement of the new quotas I propose will be no more difficult than the old: the same scale of fines for non-compliance, the same terms of imprisonment for repeated offenses will be imposed. The dates-of-destruction to be marked on Birthday Gratuities will be set as the next Potlatch Day, plus one year. Merchandise will be marked with the year-date precisely as is now done for Xmas, Dad's Day, and Mom's Day gifts. Birthday-cards will be addressed and sent from this office, just like Xmas cards."

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Major Dampfer stood and drew on his uniform gauntlets. "May I assume that you've covered the field public-relations-wise?" he asked.

"Yes, sir," Captain Winfree said. "I've composed a slogan for this year's drive in my District: 'Make the Magi Come the Year 'Round--Birthday Gratuities for All!'"

"It sings, Winfree," Major Dampfer said. "I like it. Captain, you have my nod. Carry on with this program. If you win the battle for this District, I'll get you a desk in Washington and Divisional Command; you'll help us tailor your plan to fit the entire nation."

"Thank you, sir," Winfree said, grinning. "I won't disappoint you."

"You'd best not," the Major said. He paused by the office door. "Captain Winfree, the word is on the grapevine that you're planning to marry one of the corporals in your office. That right?"

"Yes, sir," Winfree said. "Peggy and I have set the wedding for twenty-three December, the day before Potlatch. We'd be delighted should your duties allow you to attend, Major."

"I'll be there," Major Dampfer promised. "And as a little gift from the Bureau of Seasonal Gratuities, Winfree, I order you to move out on your new campaign that same day: twenty-three December." He raised a gauntleted hand. "No, Captain! Don't protest that you'll be needed here. Your work is strategy, not tactics. Your plans can be implemented by your staff while you're off on your honeymoon."

"Whatever you say, sir," Winfree said.

"I'd be further gratified," the Major continued, "if you'd hold the ceremony right here in your Headquarters Building. We of the BSG must establish some traditions, Winfree; the other Services have a century-and-a-half's lead on us in that field. So, if the lovely corporal approves, we'll make yours a proper military wedding."

"All this is very good of you, sir," Captain Winfree said. "I'm certain Peggy will be pleased."

"Good!" Major Dampfer said. "I'll handle all the details. Winfree, you've got the quality we used to know as Old-Fashioned Intestinal Fortitude, back in the day when a spade was called a spade and no apologies about it. We need more men like you in the Bureau."

"A Very Happy Potlatch to you, sir!" Winfree said, tossing back the salute. "And a Merry Xmas!"

Captain Winfree walked to the big window in the outer office to watch Major Dampfer driven off in his
sergeant-chauffeured, scarlet-and-green BSG Rolls limousine. Then he about-faced without warning to glare at his little command, the eight non-coms, the twenty-seven Other Ranks, the four young lieutenants. They all sat silent, watching him as though waiting for confirmation of an unpleasant rumor. Not a file-cabinet stood open, not a typewriter was moving. "Listen, you people," Winfree growled, pointing his swagger-stick like a weapon, not sparing even Corporal Peggy MacHenery his anger; "We've got a Potlatch Day coming up, the biggest ever. Now get on the ball, dammit! I don't want to see one of you stopping for breath again till Xmas Day." The lieutenants and sergeants flushed; the girl privates jumped their fingers onto typewriter keys. "Corporal MacHenery," Winfree said, "bring your notepad to my office."

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Peggy MacHenery, Corporal, Bureau of Seasonal Gratuities, followed her commanding officer and husband-designate into his office. "Close the door, Corporal," Winfree said. Peggy did so, and took her chair next to his desk, the pad open on her knee and her fountain pen at the ready. "No dictation," Captain Winfree said. "Please forgive me for taking valuable official time for a personal matter, Corporal; especially after that little display of tyranny I just put on out there. Peggy, Major Dampfer has ordered us to hold our wedding here at District Headquarters. He'll bring in a transport loaded with BSG brass, fly in a band to give us a send-off with pibrochs and marches and double-flams; and he'll probably set up an arch of sabers for us to parade through. Do you mind all this very much, Peggy?"

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She snapped her notepad shut. "Daddy will be furious," she said.

"Your dad is already so worked up about your marrying me, a BSG-man, that a little extra anger won't even show," Winfree said. "I'm convinced that he's teaching me fencing only in hopes I'll have a fatal accident."

"Nonsense!" Peggy said. She tossed her notebook on the desk and stood to take Winfree's hand. "Don't make Daddy out a monster, Wes. About the other thing, the military wedding, I don't care. I'd marry you in a beer-barrel, if you wanted it that way."

Captain Winfree took the girl's free hand. "Peggy," he said, "you're the greatest! Now the good news. Major Dampfer has approved my plans for instituting Birthday Gratuity Quotas in this District. Aren't you glad for me?"

"Glad?" Peggy demanded, pulling away. "Wes, do you think the consumers of this District will put up with another invasion of their pocketbooks, let alone their private sentiments?"

"Peggy, if you're going to gripe every time the Bureau raises the quotas a notch," Winfree said, "you don't belong in that uniform you're wearing."

"Want me to take it off?" Peggy challenged, reaching for the top button of her blouse.

"No, dammit!" Winfree said. "But if you're going to discuss the propriety of every decision I make, please have the grace to wait till we're outside District Headquarters to do it."

"Yes, sir; thank you, sir," Peggy said. She saluted. "Is there anything more you want to chew me out about, sir?"

Winfree saluted back, then growled at himself for the reflex. "Woman," he said, "once we're married I want to see your request for discharge lying here on my desk. How the devil can an officer run an organization when one of the enlisted personnel, the corporal he's in love with, persists in subordination?"

"I can't quit," Peggy said. "We'll need my salary, Wes, if only to pay off our BSG quotas. What with buying Xmas presents, gifts for Mom's Day and Pop's Day, and sending Birthday Gratuities to every name on our combined Nearest-and-Dearest lists, we'll be living on rice and soybeans till you make Light Colonel. Quit? Wes, if you expect to eat regular after we're married, you'd best put me in for sergeant's stripes."

"Please, Peggy," Winfree asked. "We'll discuss this all tonight, off duty, if I survive your father's swordplay. For now, please let letters out to all District wholesalers, telling them of the Birthday Quotas and the new dating procedures. Have one of the lieutenants open the secret files for you--it's all under 'Operation Nativity.' You can get at it right away."

"Very well, Captain, sir," Peggy said. "Happy Potlatch, sir." She about-faced and marched out, banging the office door behind her.

"Happy Potlatch be damned!" Captain Winfree said, flinging his swagger-stick toward the calendar.

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The MacHenery home was all gables and pinnacles and spooled porch-pillars, very like an enormous wedding-cake, every horizontal surface now frosted with a thin layer of snow. Captain Winfree tugged off his gauntlets, rang the bell, and stood straighter than usual to withstand the hostile inspection of Kevin MacHenery, Peggy's father.

Mr. MacHenery opened the door. Captain Winfree, although retaining his smile of greeting, groaned inwardly. MacHenery was wearing his canvas fencing outfit, flat-soled shoes, and carried a foil in one hand. "My you are a gorgeous sight, all Kelly-green and scarlet piping, like a tropical bird that's somehow strayed into the snowfields,"
MacHenery said. "Do come in, Captain, and warm your feathers."

"Thank you, sir," Winfree said, brushing the snow from his cap. He peeled off his overcoat and hung it on the hall tree, sticking his swagger-stick in one of its pockets. "Peggy busy?" he asked, hoping that her appearance would preclude his being given another unsolicited fencing-lesson.

"After having spent two hours in the bathroom with a curry-comb and a bottle of wave-set," MacHenery said, "my daughter has finally got down to work in the kitchen. We have time for an engagement at steel in the parlor, if you'd care to refine your style, Captain."

"Just as you say, sir," Winfree said.

"Your politeness offends me, Wes," Kevin MacHenery complained, handing him a foil and a wire-mesh mask. "Slip off your shoes. It's a terrible burden you are laying on the shoulders of an aging man, being so well-spoken when he likes nothing more than argument. Now assume the on guard position, Wesley."

Winfree obediently placed his feet at right angles, raised his foil, and "sat down," assuming the bent-leg position and feeling his leg-muscles, still sore from his last session with MacHenery, begin to complain. "You're holding your foil like a flyswatter," MacHenery said. "Here, like this!"

"None of that, Daddy," Peggy said, appearing from the kitchen. "I'll not have you two sitting down to eat all sweaty and out of breath, like last time Wes was over here."

"She treats me like a backward child," MacHenery said. He took a bottle from a shelf and poured generous dollops of Scotch into two glasses, one of which he handed to Winfree. "Inasmuch as I disapprove of the coming season," he said, "I'll offer you no toast, Captain."

"You don't care even for Xmas?" Winfree asked in a tone of mild reproach.

"Ex-mas?" MacHenery demanded. "What the devil is this nor-fish-nor-fowl thing you call Ex-mas? Some new festival, perhaps, celebrated by carillons of cash-register chimes?"

"Christmas, if you prefer, sir," Winfree said. "We in the Bureau of Seasonal Gratuities get used to using the other name. We use the word so much in writing that cutting it from nine letters to four saves some thirty thousand dollars annually, in this District alone."

"That's grand," MacHenery said. He sat down with his whiskey. "Simply grand."

"We could drink to a Happy Potlatch," Captain Winfree suggested.

"I'd sooner toast my imminent death by tetanus," MacHenery said.

"I'd like to taste this stuff," Winfree said. "Let's compromise. Can we drink to Peggy?"

"Accepted," MacHenery said, raising his glass. "To my Peggy--our Peggy." He gave the whiskey the concentration it deserved. Then, "You know, Wesley," he said, "if you weren't in the BSG I could like you real well. I'd rejoice at your becoming my son-in-law. Too bad that you wear the enemy uniform."

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"The BSG is hardly an enemy," Winfree said. "It's been an American institution for a long time. This is excellent whiskey."

"We'll test a second sample, to see whether its quality stands up through the bottle," MacHenery suggested. "For all we know, they may be putting the best on top." He poured them each another. "Yes, Wesley, the Bureau of Seasonal Gratuities has been with the American consumer quite a while. Twenty years it'll be, come next Potlatch Day. You were brought up in the foul tradition, Wes. You don't know what our country was like in the good old days, when Christmas was spelled with a C instead of an X."

"I know that a paltry twenty billion dollars a year were spent on Xmas--sorry, sir--on Christmas Gratuities, back before my Bureau came on the scene to triple that figure, to bring us all greater prosperity."

"Your Bureau brought us the stink of burning," MacHenery said. "It brought us the Potlatch Pyres."

"Yes, Potlatch!" Captain Winfree said. "Potlatch Pyres and Potlatch Day--childhood's brightest memory. Ah, those smells from the fire! The incense of seared varnish; the piny smoke from building-blocks tossed into the flames; the thick wool stinks of dated shirts and cowboy-suits, gasoline-soaked and tossed into the Potlatch Pyre. My little brother, padded fat in his snowsuit, toddling up to the fire to toss in his dated sled, then scampering back from the sparks while Mom and Dad smiled at him from the porch, cuddling hot cups of holiday ponchero in their hands."

"Seduction of the innocents," MacHenery said. "Training the babes to be wastrels."

"We loved it," Winfree insisted. "True, the little girls might cry as they handed a dated doll to the BSG-man; while he prepared it for suttee with a wash of gasoline and set it into the fire; but little girls, as I suppose you know, relish occasions for weeping. They cheered up mighty quick, believe me, when the thermite grenades were set off, filling the night air with the electric smell of molten metal, burning dated clocks and desk-lamps, radios and humidors, shoes and ships and carving-sets; burning them down to smoke and golden-glowing puddles under the ashes of the Potlatch Pyre. Then the fireworks, Mr. MacHenery. The fireworks! The BSG-man touching a flaming
torch to the fuses of the mortars; a sizzle and a burst; the Japanese star-shells splitting the sky, splashing across the night's ceiling, scattering from their pods, blossoming into Queen Anne's Lace in a dozen colors of fire.

"Fire and destruction," MacHenery said. "There's your holiday for children--fire and destruction!"

"You missed it, sir," Winfree said. "You don't understand. Potlatch is a wonderful day for children, a glorious introduction to the science of economics. The boys light Roman candles, shooting crimson and orchid and brass-flamed astonishers into the clouds. A soft fog of snow makes fuzzy smears of the pinwheels, of the children racing, sparklers in both hands, across the frozen lawn. Dad lights the strings of cannon-crackers--at our house they used to dangle from a wire strung across the porch, like clusters of giant phlox--and they convulse into life, jumping and banging and scattering their red skins onto the snow, filling the air with the spice of gunpowder.

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"The high-school kids come home from their Potlatch Parties ..."

"Wreckage and mayhem," MacHenery grunted. "We used to throw the same kind of parties when I was a tad, but they were against the law, back then. We called 'em chicken-runs."

"But nowadays, sir, those Potlatch Parties contribute to the general prosperity," Winfree explained. "Used-car lots used to border all the downtown streets, anchors on progress. Now those dated cars are smashed, and used for scrap. The high-school drivers work off their aggressions ramming them together. And there's no mayhem, Mr. MacHenery; the BSG-man assigned to Potlatch Parties strap the kids in safe and make sure their crash-helmets fit tight. It's all clean fun."

"Morally," MacHenery said, "Potlatch Parties are still chicken-runs."

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Peggy came back, as sleek and crisp as though cooking were an expensive sort of beauty treatment. "Supper will be ready in five minutes," she said. "If you tigers will wash up ..."

"We'll drink up, first," her father said. "This man of yours has been feeding me BSG propaganda. I'm not sure I have any appetite left."

"What started you hating the Bureau of Seasonal Gratuities, Mr. MacHenery?" Winfree said. "You ever read Suetonius, Wes?" he asked.

"No, sir."

"Yours is a generation of monoglots," MacHenery sighed. "It figures, though. There's no profit in having today's youth read the clinical record of another civilization that died of self-indulgence, that went roistering to its doom in a carnival of bloat."

"Doom?" Winfree asked.

"Doom richly deserved," MacHenery said. "Old Suetonius describes, for example, an instrument that accompanied dinner-parties during the reigns of the last few Caesars. It was a device that accomplished, two thousand years ago, the function of our proud Bureau of Seasonal Gratuities. A feather, my boy. A simple goose-quill."

"I don't understand," Winfree said.

"I'd be hurt if you did, Captain," MacHenery said. "I've set my mind on explaining the point. Now you see, Wes, the late Caesars were pretty good consumers of everything but petroleum, we having that edge on them. They spread a mighty fine table. A gourmet would bring to Rome caviar from the Caucasus, peaches from Majorca, and, for all I know, kippers from Britain. Picture it, Wesley: cherries served in golden bowls, heaped on the snow trotted down from mountain-tops by marathons of slaves. A dish called The Shield of Minerva was one of their greatest delights; this being an Irish stew compounded of lamprey-milt, pike-livers, flamingo-tongues, and the tiny, tasty brains of pheasants and peacocks; eaten while viewing the floor-show of strip-teasing Circassian girls or--Galba's invention, this--elephants walking tight-rope. Grand, Wes. No meals like that at the supermarket; no shows like that even on the television."

"But the feather?" Winfree prompted.

"Ah, yes," MacHenery said. "The moment our noble Roman had eaten his fill he'd pick up the feather next to his plate and, excusing himself, adjourn to the adjoining vomitorium. A few tickles of the palate, and his first meal would be only a lovely memory. He'd saunter back to his bench by the table again, ready to set to with another helping of Minerva's Shield."

"Disgusting," Winfree said.

"Yes, indeed," MacHenery agreed, smiling and fitting his fingertips together. "Now attend my simile, Captain. Unlike those feathered Romans of the Decadence, we moderns settle for one meal at a sitting, and let it digest in peace. We have instead our more sophisticated greeds, whetted by subtle persuasions and an assurance that it's really quite moral to ransom our future for today's gimmicks."

"Prosperity requires the cooperation of every citizen," Captain Winfree said, quoting an early slogan of the
"Your artificial prosperity requires us, the moment we’re sated with chrome chariots and miracle-fiber dressing-gowns and electronic magics, the minute our children have toys enough to last them through the age of franchise, to take in hand the feather forced upon us by regulation of the Bureau of Seasonal Gratuities and visit the parish Potlatch Pyre, our modern vomitorium, to spew up last year’s dainties to make belly-room for a new lot," MacHenery said.

"Daddy!" Peggy MacHenery protested from the living-room doorway. "What sort of table-talk is that?"

"Truth is the sweetest sauce, Peggy," MacHenery said, getting up from his chair. "What delights have you cooked up for us, child?"

"Your favorite dish, Daddy," Peggy said, grinning at him. "Peacock brains on toast."

The next two weeks were too busy for Captain Winfree to partner Kevin MacHenery on the fencing-mat. He was double-busy, in fact; planning the biggest Potlatch Day in twenty years at the same time he started the wheels of his project to make birthdays Gratuity Days for every consumer in his District.

The girls, assisted by two of the male sergeants, had decorated the District Headquarters till it glittered like a child’s dream of the North Pole. Against one wall they’d placed the Xmas tree, its branches bearing dozens of dancing elves, Japanese swordsmen, marching squads of BSG-recruits, prancing circus-ponies; all watch-work figures busy with movement, flashing with microscopic lights, humming little melodies that matched their motions. A giant replica of the Bureau’s cap-blem—-the Federal eagle clutching between his talons a banderole bearing the motto, 'Tis More Blessed to Give Than Receive—had been mounted on the center wall, the place of honor. Beneath the eagle stood a bandstand draped in bunting, ready to accommodate the Bureau of Seasonal Gratuities Brass-Band-and-Glee-Club, the members of which were to fly in from Washington to grace the bridal day with epithalamiums and martial song.

The big work, the eight-hours-a-day and after-supper-overtime work, was the preparation for Potlatch Day, the festival that meant to the BSG what April Fifteenth means to the Internal Revenue Service. Cases of fireworks piled up in the brick warehouse next door to Headquarters. Sawdust-packed thermite grenades were stacked right up to the perforated pipes of the sprinkler system. No Smoking sign blossomed a hundred yards on every side. The blacklists, naming consumers who’d withheld dated gifts from the Potlatch Pyres of earlier years, were brought up to date and distributed to the Reserve BSG Officers in each township of Winfree’s District. These holdouts, it was safe to assume, would be under surveillance on Potlatch Day. Cold-eyed sergeants and lieutenants would make note of the material each of them consigned to the flames, and would cross-check their notes with Nearest-and-Dearest lists to make sure that all post-dated Mom’s Day and Dad’s Day gratuities, all of last Xmas’s gifts, had been destroyed as required by BSG ordinance.

Meanwhile letters piled into Captain Winfree’s office, thousands of them each time the Post Office truck stopped outside Headquarters. Several of these were penned in a brownish stuff purported to be their authors’ lifeblood; and all voiced indignation against Schedule 121B, Table 12, which set minimum levels of cost for the birthday gratuities they’d have to give each of the fifteen persons on their Nearest-and-Dearest lists. Hundreds of protests were printed in the vox populi columns of District newspapers, recommending every printable form of violence against agents of the Bureau. BSG practice was to regard with benign eye public outcry of this sort. No consumer in Winfree’s District, immersed as he was in the debate over Birthday Gratuity Minima, could possibly plead ignorance should he be apprehended in violation of these new regulations.

Finally, it was two days before Xmas, Potlatch Day Minus One. Phone-calls had rippled out from District Headquarters, calling all BSG Reservists to the colors, assigning them to Potlatch Duty in the townships or patrol in the city; telling each officer and non-com where and when to submit his requisition for pyrotechnical devices, gasoline, thermite bombs, and pads of BSG Form No. 217-C, "Incident of Consumer Non-Compliance." And the day was even more than this. It was the day Captain Wesley Winfree was to wed Corporal Margaret MacHenery in the sight of God, man, and the glitteringest crowd of BSG brass ever assembled outside Washington.

By noon the typewriters in Headquarters were covered and shoved with their desks behind folding screens hung with pine-boughs. Every wheel in the District motor pool was on the highway from the airport, shuttling in the wedding-party. The bride, closeted in an anteroom with a gaggle of envious bachelor-girls, was dressing herself in winter greens, her chevrons brilliant against her sleeves. Peggy had pinned a tiny poinsettia to her lapel; strictly against Regulations; but who’d have the heart to reprimand so lovely a bride? The minister who was to perform the wedding, a young captain-chaplain of BSG, paced amongst the hidden desks, memorizing the greetings he’d composed to precede the formal words of wedding. The guests came laughing through a corridor of potted pines into the District Headquarters, where they were greeted by the BSG Band-and-Glee-Club’s rendition of the Bureau’s
official anthem, "I'm Dreaming of a White Potlatch." As though it had been arranged by Washington, snow had indeed begun to fall; and the tiers of overcoats racked in the outer hall were beaded with melted flakes.

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The groom, wearing his dress greens—the winter uniform worn with white shirt and a scarlet bow-tie—was still trapped behind his desk, hardly conscious of the joyful noises from beyond the door. "They haven't shown?" he bellowed into the telephone. "Don't fret your head about it, Sergeant. Those Reservists will damned well be on duty tomorrow morning or we'll have their cans in a courtroom before dark." Slam! An anxious girl Pfc tiptoed in. "Sir, a consumer's delegation wishes to speak with you about the new Birthday Quotas."

"Tell them they're stuck with it," Winfree snapped. "Hand these around that delegation, Soldier," he said, shoving a stack of Schedules 1219B across his desk toward the girl. "Tell that bunch of complainers I'll keep this District's economy healthy if I have to jail every consumer in it."

The phone rang again. "It's me, Wes, Peggy."

"Darling, I'm busy," Winfree said.

"Didn't you write our wedding-date on your appointment list?" she asked. "It'll only take a quarter-hour."

"Don't marry anyone else," Winfree said. "I'll be right out." He hung up the phone and stood at the mirror in his closet to check his uniform. Then he picked up his silver-trimmed dress swagger-stick and marched out into the main office to meet the chaplain, and his wife.

Major Stanley Dampfer, glorious in his dress greens, a Sam Bowie belt equating his belly and supporting the side-arm holstered by one big hip, slapped Winfree on the back as he entered the hall. "At ease!" the Major shouted, then glanced contritely toward the two BSG colonels who'd been talking the loudest. "Gentlemen, ladies: I want to present the founder of this feast, the brightest star in the Bureau's firmament, the young genius of Birthday Gratuity Quotas. I refer, of course, to Captain Wesley Winfree!"

[Applause, shouts, a few ribald remarks from the officers nearest the bar]

"I just want to tell you all," the Major went on, his arm heavy across Winfree's unwilling shoulders, "before I relinquish this fine young officer to his new commander, a corporal ..."

[Laughter]

"... that here's a man who's going places. Look well at Captain Winfree's face, friends. You will see it yet on the cover of Time, above a pair of stars."

[Applause]

* * * * *

The Major freed Captain Winfree, the guests settled down into their folding-chairs, and the chaplain opened his BSG Book of Authorized Ceremonies. He and the affianced couple stood alone together in a moment of silence. He opened the service. "Dearly beloved, we are gathered together here ...

"... Margaret, wilt thou have this Man to thy wedded husband ... so long as ye both shall live? ... by virtue of the authority vested in me by the Corps of Chaplains, Bureau of Seasonal Gratuities, I pronounce that you are Man and Wife. Amen, and Congratulations!"

The first wedded kiss, and the stag-line demanding its similar perquisite. Kevin MacHenery seized his son-in-law's right hand. "I wish you both fifty happy years, Wes," he said. "I hope you'll see the light soon, and spend most of those years in decent mufti." Major Dampfer shouldered Mr. MacHenery aside to tug Winfree and his new wife toward the mountain of gifts, covered like a giant's corpse with a sheet, standing by the base of the Xmas tree. The Major triumphantly pulled a ripcord, and the sheet dropped away. Beneath it were dozens of boxes and bundles and bottles, wrapped in scarlet and green and silver and gold. "Open them!" some guest prompted from the end of the hall.

"Why open them?" Corporal Mrs. Peggy Winfree asked. "Anyone got a match? We'll have our Potlatch Pyre right here and now, burn them right off instead of waiting a year."

"The lady jests," Major Dampfer assumed. "Wedding-gifts, Corporal, aren't subject to Potlatching."

"Goody," Peggy said.

"I'll have some of the enlisted guests carry these gratuities out to your car," the Major said. "You can unwrap them during your honeymoon." He chuckled.

Towing his bride with his left hand, accepting handshakes with his right, Captain Winfree shouldered his way through the mob of brass and chevrons to the door. His car, adorned with a Just Married sign that completely obscured the rear window, trailing strings of shoes and empty milk-tins, stood at the end of a corridor formed by two face-to-face ranks of BSG Officer-Candidates. The OCS-men wore dress greens and Academy helmets, and about the waist of each hung a saber. Consumers stood gray and inconspicuous behind the two rows of uniformed men, silent, unsmiling, like onlookers at an accident. Captain Winfree looked over this civilian crowd. Each person wore, pinned to a lapel, perched in a hatbrim, or worn like a corsage, a small white feather. "We'd best hurry, Peggy," he
said, urging her toward the gantlet.

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The Officer-Candidates, on a signal from Major Dampfer, snicked their ceremonial sabers from their scabbards and presented them, blade-tip to blade-tip, as an archway. The BSG Band-and-Glee-Club, playing and singing, "Potlatch Is Comin' to Town," stood in the doorway. Captain Winfree, clasping Peggy's gloved hand tightly, led her through the saber-roofed aisleway as rapidly as he could. "What's the rush, Wes?" she asked. "We'll get married only once, and I'd like to see the ceremony well enough to be able to describe it to our eventual children, when they ask me what it was like."

Winfree opened the door of their car. "We'd better get out of here," he said. "I smell a riot brewing; and I don't want you to have to describe that to our children."

Peggy scooted into the car just as the District Headquarters building burped out a giant bubble of smoke. An arm reached out to Winfree's lapel and tugged him back from the car. "You're going nowhere, buddy," a civilian growled at him. The man, Winfree saw, was wearing the ubiquitous white feather in his lapel. As Winfree shook himself free from the civilian, the arch of sabers above them collapsed. The BSG-OCS-men were tossed about in a mob of suddenly screaming consumers, waving their weapons as ineffectively as brooms. Fragments were spun off the whirl of people, bits of BSG uniforms torn off their wearers and tossed like confetti. A huge pink figure, clad in one trouser-leg and a pair of shorts, smeared across the chest and face with soot, dashed toward Winfree, waving a .45 pistol. "Stop this violence!" he screamed at the consumers in his way, leveling his pistol. "Maintain the peace, dammit! or I'll shoot!"

"That idiot!" Winfree said. He slammed the door of the car to give Peggy a little protection, then scooped up a handful of snow from the gutter to pound into a ball and toss like a grenade at the back of Major Dampfer's neck. The Major's boots flew out from under him, and he landed belly-down in the snow, burying his pistol's muzzle. The gun went off, flinging itself like a rocket out of his hand. Winfree snatched it up. "Blanks!" he yelled, waving the .45. "He was only going to shoot blanks."

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Three more civilians, wearing the white-feather symbol on their overcoats, advanced toward Winfree. Together, like partners in a ballet, they bent to build snowballs, then stood and let fly. Winfree ducked, found one of the dress sabers ignominiously sheathed in snow, and drew it out. He retreated toward the automobile, the saber raised to protect Peggy. "Stand back," he shouted. "I don't want to bloody-up this clean snow."

Another mitrailleusade of snowballs connected, knocking off Winfree's cap and sending a shower of snow down his collar. The Headquarters building was burning so well that it served as a warming bonfire to the tattered BSG personnel. A squad of civilian youngsters was chasing Major Dampfer down the street, pelting the huge target of his backside with snowballs.

The BSG Band-and-Glee-Club, covering their nakedness by pooling their rags, were a musical rabble. Kevin MacHenery, carrying a saber captured from one of the BSG-OCS-men, shouted to a tuba-player, the bell of whose horn had been dimpled by a hard-cored snowball. "Play the National Anthem," he yelled. The player, chilly and terrified, raised the mouthpiece of the tuba to his lips and, looking fearfully about like the target of a test-your-skill ball-throwing game, puffed out the sonorous opening notes. One by one the other players, a flute behind an elm tree, a trumpet hidden in the back seat of a parked limousine, a snow-damaged snare-drum, joined in; gravitating towards one another through the suddenly quiet crowd. Winfree, like the other men, civil and BSG, stood at attention; but as he felt Peggy's arm slip through his he spoke out of the corner of his mouth. "Get back to the car, Peggy," he said. "Drive like hell out of this chivaree. I'll meet you at your dad's place. Now git!"

"You think maybe I had my fingers crossed when I promised to have and hold you?" she asked. "You're my man, Wes. If you get beat up, I want my eyes blackened to match yours."

The anthem drew to a close just as a new instrument, the siren of a firetruck, joined in. "Stop that truck!" one of the insurgent consumers shouted. "Don't let 'em touch our fire."

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The mob went back into action in two task-forces; one dedicated to the extirpation of the BSG-men currently available, the other clustered around the firetruck, thwarting the fire-fighters' efforts to couple their hose to the hydrant. One youngster, wearing the black leather jacket and crash-helmet of a Potlatch Party, ran from the fireworks warehouse with a thermite grenade. Pulling the pin, he tossed the sputtering bomb through a window of the burning building. "Stop him!" the white-helmeted fire-chief shouted.

"Stop him, hell!" a consumer replied. "Man, we got a rebellion going. Don't you guys try to throw cold water on it unless you'd like to be squirted solid ice with your own hose."

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The fire-chief, his hands raised in despair, turned to his colleagues. "Stand by, boys," he said. "Nothing we can
"Pretty, isn't it?" one of the firemen remarked, dropping the canvas hose. "We never get to see a building burn all the way. Think of all the papers in there, file-cabinets full of government regulations, lists of all our birthdays, quota-forms; all curling up and turning brown and reaching the kindling point. Nice fire, Chief."

The fire-chief faced Headquarters, a new look replacing his anxiety. "It is kind of pretty," he admitted. He turned to the consumer ringleader. "OK with you if we throw a little water on the fireworks warehouse?" he asked.

"Sure," the man said. "We don't want to blow up the old home-town; we only want to put the BSG out of business."

His band of consumers stepped back from the yellow fireplug to let the firemen hook up their hoses, toggle on the pressure, and begin playing water over the blank face of the fireworks warehouse.

Captain Winfree was buried in hard-fisted civilians, all seemingly intent on erasing him as the most familiar symbol of the Bureau of Seasonal Gratuities. Winfree bobbed to the surface of the maelstrom for a moment, waving his saber, and shouted, "MacHenery! Get these jokers off my back before I'm knee-deep in cold meat." He thrwacked another of his assailants across the pate with the flat of his blade.

MacHenery, using his saber as a lever, pried himself a path through the crowd. As he reached Captain Winfree, he raised his saber. "The crowd about the two men retreated. "These folks have suffered a lot from you, Captain," MacHenery said. "Think maybe they're due to see a little bloodshed?"

"OK by me," Winfree said, panting, "if you don't mind shedding it." He raised his saber in salute--the only fencing-movement he'd become proficient in--and jumped into a crouch. MacHenery closed, and the two blades met in a clanging opening. "Peggy's father, for all his handicap of twenty years, was a fencer; Winfree, in his maiden effort as a sabreur, used his weapon like a club. He allemanded about MacHenery, now and then dashing in with clumsy deliveries that were always met by the older man's blade.

Those firemen not immediately concerned with spraying the warehouse wall mounted the racks of their truck to watch the duel. BSG-men and -women, huddled close to the warmth of the burning building, watched unhappily as their champion was forced to retreat before MacHenery's technique. "He'll kill him!" Peggy shouted. She was restrained from trying to break up the fight by two burly consumers.

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Winfree, trying a gambit he'd seen in one of MacHenery's books but had never before attempted, extended his saber and flew forward toward MacHenery in a flèche. MacHenery caught Winfree's blade on his own and tossed it aside. He brought back his own weapon to sketch a line down the Captain's right cheek. The scratch was pink for a moment, then it started to bleed heavily. The crowd shouted encouragement, the BSG-troops groaned. "Keep cool, Wes," MacHenery whispered to his opponent as they dos-à-dos back into position. "I have to make this look fierce or they'll insist on lynching you."

"Don't make it look too good," Winfree panted. "Cover yourself--I might hurt you out of sheer clumsiness." His chin and throat were covered with blood, now; blood enough to satisfy the most indignant consumer. The moment the measure was set again, Winfree lunged, trying to slip his blade beneath MacHenery's guard to strike his arm. His foil met the flash of the other man's forte, and his blade bounced aside like a sprung bow.

MacHenery slammed his saber into Winfree's, spinning the weapon out of his hand into the crowd. He lunged then, delivering his point against Winfree's chest. Peggy, released from her captors, burst from the crowd to throw herself against her father. "Stop it, Daddy!" she pleaded, "please stop!"

MacHenery raised his saber in salute. "All right, Pocahontas," he said. "Take your John Smith home and patch up that cut. It's no worse than what he gets shaving." He turned to the crowd, his saber still raised in salute. "Potlatch is over forever!" he shouted.

Urged by a delegation of music-loving consumers, the tubist raised his ravaged horn. The other members of the BSG Band-and-Glee-Club gathered round him, all ragged, some with one eye closed by a purple fist-mark; and they began, on the tubist's signal, "God Rest Ye Merry, Gentlemen." The District Headquarters building, gutted, was glowing like an abandoned fireplace. The firemen joined the singing as they coiled their hoses. The Potlatch Riot was over.

Winfree led his wife to their car. The Just Married sign was still in place, but the car's train of shoes and milk-cans had been ripped off to furnish ammunition in the fight. "Let's go home, Peggy," Winfree said. "I yearn for a fireside and some privacy."

Kevin MacHenery spoke from the back seat. "You deserve them, Wes," he said.

"What are you doing here?" Peggy demanded, twisting to face her father. "After you cut up my Wes you should be ashamed to show us your face."

"I want to apologize for that unfortunate necessity," MacHenery said. "But if I hadn't scratched him, Peggy-my-heart, the mob might have done more radical surgery. I saw one consumer with a rope, trying different knots."

"Apology accepted," Winfree said. "Now, if you don't mind, Mr. MacHenery, Peggy and I'd like to be alone."
"Of course," MacHenery said. "First, though, I'd like to present you a decoration to commemorate your part in this skirmish, Wes." He took the little white feather from his hatbrim and attached it to Winfree's tattered, blood-stained tunic.

"What's this for?" Winfree asked.

"For services rendered the Rebellion," MacHenery said. "I've often wondered why it's only the Tom Paines and the Jeffersons who get honored by successful rebels. There's many a revolution, Wesley, that would have failed except for the dedicated tyranny of the men it overthrew."

"I don't understand, Daddy," Peggy protested.

"Wes will probably explain to you sometime how he brought this all on himself," MacHenery said, opening his door to get out. "Now I expect you two have other things to talk about. Thank you, Captain Winfree, for playing so excellent a George the Third to our rebellion."

"Thank you, sir," Winfree said, raising his hand in salute. "I wish you a Merry, nine-letter Christmas."

THE END
INVASION
by Murray Leinster

The whole fighting fleet of the United Nations is caught in Kreynborg’s marvelous, unique trap

It was August 19, 2037. The United Nations was just fifty years old. Televisors were still monochromatic. The Nidics had just won the World Series in Prague. Com-Pub observatories were publishing elaborate figures on moving specks in space which they considered to be Martian spaceships on their way to Earth, but which United Nations astronomers could not discover at all. Women were using gilt lipsticks that year. Heat-induction motors were still considered efficient prime movers.

Thorn Hard was a high-level flier for the Pacific Watch. Bathyletis was the most prominent of nationally advertised diseases, and was to be cured by RO-17, "The Foundation of Personal Charm." Somebody named Nirdlinger was President of the United Nations, and somebody else named Krassin was Commissar of Commissars for the Com-Pubs. Newspapers were printing flat pictures in three colors only, and deplored the high cost of stereoscopic plates. And ... Thorn Hard was a high-level flier for the Pacific Watch.

That is the essential point, of course--Thorn Hard’s work with the Watch. His job was, officially, hanging somewhere above the twenty-thousand-foot level with his detector-screens out, listening for unauthorized traffic. And, the normal state of affairs between the Com-Pubs and the United Nations being one of highly armed truce, "unauthorized traffic“ meant nothing more or less than spies.

But on August 19th, 2037, Thorn Hard was off duty. Decidedly so. He was sitting on top of Mount Wendel, in the Rockies; he had a ravishingly pretty girl sitting on the same rock with him, and he was looking at the sunset. The plane behind him was an official Watch plane, which civilians are never supposed to catch a glimpse of. It had brought Thorn Hard and Sylva West to this spot. It waited now, half-hidden by a spur of age-eroded rock, to take them back to civilization again. Its G.C. (General Communication) phone muttered occasionally like the voice of conscience.

The colors of the mountain changed and blended. The sky to westward was a glory of a myriad colors. Man and girl, high above the world, sat with the rosy glow of dying sunlight in their faces and watched the colors fade and shift into other colors and patterns even more exquisite. Their hands touched. They looked at each other. They smiled queerly, as people smile who are in love or otherwise not quite sane. They moved inevitably closer....

And then the G.C. phone barked raucously:

"All Watch planes attention! Urgent! Extreme high-level traffic reported seven-ten line bound due east, speed over one thousand. All Watch planes put out all detectors and use extra vigilance. Note: the speed, course, and time of report of this traffic checks with Com-Pub observations of moving objects approaching Earth from Mars. This possibility should be considered before opening fire."

Thorn Hard stiffened all over. He got up and swung down to the stubby little ship with its gossamer-like wings of cellate. He touched the report button.

"Plane 257-A reporting seven-ten line. Thorn Hard flying. On Mount Wendel, on leave. Orders?"

He was throwing on the screens even as he reported. And the vertical detector began to whistle shrilly. His eyes darted to the dial, and he spoke again.

"Added report. Detector shows traffic approaching, bound due east, seven hundred miles an hour, high altitude.... Correction; six-fifty miles. Correction; six hundred." He paused. "Traffic is decelerating rapidly. I think, sir, this is the reported ship."

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And then there was a barely audible whining noise high in the air to the west. It grew in volume and changed in pitch. From a whine it became a scream. From a scream it rose to a shriek. Something monstrous and red glittered in the dying sunlight. It was huge. It was of no design ever known on earth. Wings supported it, but they were obscured by the blasts of forward rockets checking its speed.

It was dropping rapidly. Then lifting-rockets spouted flame to keep it from too rapid a descent. It cleared a mountain-peak by a bare two hundred feet, some two miles to the south. It was a hundred-odd feet in length. It was ungainly in shape, monstrous in conformation. Colossal rocket-tubes behind it now barely trickled vaporous discharges. It cleared the mountain-top, went heavily on in a steep glide downward, and vanished behind a mountain-flank. Presently the thin mountain air brought the echoed sound of its landing, of rapid-fire explosions of rocket-tubes, and then silence.
Thorn Hard was snapping swift, staccato sentences into the report-transmitter. Describing the clumsy glittering monster, its motion; its wings; its method of propulsion. It seemed somehow familiar despite its strangeness. He said so.

Then a vivid blue flame licked all about the rim of the world and was gone. Simultaneously the G.C. speaker crashed explosively and went dead. Thorn went on grimly, switching in the spare.

"A very violent electrical discharge went out from it then. A blue light seemed to flash all around the horizon at no great distance and my speaker blew out. I have turned on the spare. I do not know whether my sender is functioning--"

The spare speaker cut in abruptly at that moment:
"It is. Stay where you are and observe. A squadron is coming."

Then the voice broke off, because a new sound was coming from the speaker. It was a voice that was unhuman and queerly horrible and somehow machine-like. Hoots and howls and whistles came from the speaker. Wailing sounds. Ghostly noises, devoid of consonants but broadcast on a wave-length close to the G.C. band and therefore produced by intelligence, though unintelligible. The unhuman hoots and wails and whistles came through for nearly a minute, and stopped.

"Stay on duty!" snapped the G.C. speaker. "That's no language known on earth. Those are Martians!"

Thorn looked up to see Sylva standing by the Watch-plane door. Her face was pale in the growing darkness outside.

"Beginning duty sir," said Thorn steadily, "I report that I have with me Miss Sylva West, my fiancée, in violation of regulations. I ask that her family be notified."

He snapped off the lights and went with her. The red rocket-ship had landed in the very next valley. There was a glare there, which wavered and flickered and died away.

"Martians!" said Thorn in fine irony. "We'll see when the Watch planes come! My guess is Com-Pubs, using a searchlight! Nervy!"

The glare vanished. There was only silence, a curiously complete and deadly silence. And Thorn said, suddenly:
"There's no wind!"

There was not. Not a breath of air. The mountains were uncannily quiet. The air was impossibly still, for a mountain-top. Ten minutes went by. Twenty. The detector-whistles shrilled.

"There's the Watch," said Thorn in satisfaction. "Now we'll see!"

And then, abruptly, there was a lurid flash in the sky to northward. Two thousand feet up and a mile away, the unearthly green blaze of a hexynitrate explosion lit the whole earth with unbearable brilliance.

"Stop your ears!" snapped Thorn.

The racking concussion-wave of hexynitrate will break human eardrums at an incredible distance. But no sound came, though the seconds went by.... Then, two miles away, there was a second gigantic flash.... Then a third.... But there was no sound at all. The quiet of the hills remained unbroken, though Thorn knew that such cataclysmic detonations should be audible at twenty miles or more. Then lights flashed on above. Two--three--six of them. They wavered all about, darting here and there.... Then one of the flying searchlights vanished utterly in a fourth terrific flash of green.

"The watch planes are going up!" said Thorn dizzily. "Blowing up! And we can't hear the explosions!"

Behind him the G.C. speaker barked his call. He raced to get its message.

"The Watch planes we sent to join you," said a curt voice he recognized as that of the Commanding General of the United Nations, "have located an invisible barrier by their sonic altimeters. Four of them seem to have rammed it and exploded without destroying it. What have you to report?"

"I've seen the flashes, sir," said Thorn unsteadily, "but they made no noise. And there's no wind, sir. Not a breath since the blue flash I reported."

A pause.

"Your statement bears out their report," said the G.C. speaker harshly. "The barrier seems to be hemispherical. No such barrier is known on Earth. These must be Martians, as the Com-Pubs said. You will wait until morning and try to make peaceful contact with them. This barrier may be merely a precaution on their part. You will try to convince them that we wish to be friendly."

"I don't believe they're Martians, sir--"

Sylva came racing to the door of the plane.

"Thorn! Something's coming! I hear it droning!"
Thorn himself heard a dull droning noise in the air, coming toward him.

"Occupants of the rocket-ship, sir," he said grimly, "seem to be approaching. Orders?"

"Evacuate the ship," snapped the G.C. phone. "Let them examine it. They will understand how we communicate and prepare to receive and exchange messages. If they seem friendly, make contact at once."

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Thorn made swift certain movements and dived for the door. He seized Sylva and fled for the darkness below the plane. He was taking a desperate risk of falling down the mountain-slopes. The droning drew near. It passed directly overhead. Then there was a flash and a deafening report. A beam of light appeared aloft. It searched for and found Thorn's plane, now a wreck. Flash after flash and explosion after explosion followed....

They stopped. Their echoes rolled and reverberated among the hills. There was a hollow, tremendous intensification of the echoes aloft as if a dome of some solid substance had reflected back the sound. Slowly the rollings died away. Then a voice boomed through a speaker overhead, and despite his suspicions Thorn felt a queer surprise. It was a human voice, a man's voice, full of a horrible amusement.

"Thorn Hardt! Thorn Hardt! Where are you?" Thorn did not move or reply. "If I haff not killed you, you hear me," the voice chuckled. "Come to see me, Thorn Hardt. Der dome of force iss big, yes, but you can no more get out than your friends can get in. And now I haff destroyed your phones so you can no longer chat with them. Come and see me, Thorn Hardt, so I will not be bored. We will discuss der Com-Pubs. And bring der lady friend. You may play der chaperon!"

The voice laughed. It was not pleasant laughter. And the humming drone in the air rose and dwindled. It moved away from the mountain-top. It lessened and lessened until it was inaudible. Then there was dead silence again.

"By his accent, he's a Baltic Russian," said Thorn very grimly in the darkness. "Which means Com-Pubs, not Martians, though we're the only people who realize it; and they're starting a war! And we, Sylva, must warn our people. How are we going to do it?"

She pressed his hand confidently, but it did not look promising. Thorn Hard was on foot, without a transmitter, armed only with his belt-weapons and with a girl to look after, and moreover imprisoned in a colossal dome of force which hexynitrate had failed to crack....

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It was August 20, 2037. There was a triple murder in Paris which was rumored to be the work of a Com-Pub spy, though the murderer's unquestionably Gallic touches made the rumor dubious. Newspaper vendor-units were screaming raucously, "Martians land in Colorado!" and the newspapers themselves printed colored-photos of hastily improvised models in their accounts of the landing of a blood-red rocket-ship in the widest part of the Rockies. The inter-continental tennis matches reached their semi-finals in Havana, Cuba. Thorn Hard had not reported to Watch headquarters in twelve hours. Quadruplets were born in Des Moines, Iowa. Krassin, Commissar of Commissars of the Com-Pubs, made a diplomatic inquiry about the rumors that a Martian space-ship had landed in North America. He asked that Com-Pub scientists be permitted to join in the questioning and examination of the Martian visitors. The most famous European screen actress landed from the morning Trans-Atlantic plane with her hair dyed a light lavender, and beauty-shops throughout the country placed rush orders for dye to take care of the demand for lavender hair which would begin by mid-afternoon. The heavy-weight champion of the United Nations was warned that his title would be forfeited if he further dodged a fight with his most promising contender. And ... Thorn Hard had not reported to Watch headquarters in twelve hours.

He was, as a matter of fact, cautiously parting some bushes to peer past a mountain-flank at the red rocket-ship. Sylva West lay on the ground behind him. Both of them weary to the point of exhaustion. They had started their descent from Mount Wendel at the first gray streak of dawn in the east. They had toiled painfully across the broken country between, to this point of vantage. Now Thorn looked down upon the rocket-ship.

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It lay a little askew upon the ground, seeming to be partly buried in the earth. A hundred feet and more in length, it was even more obviously a monstrosity as he looked at it in the bright light of day. But now it was not alone. Beside it a white tower reared upward. Pure white and glistening in the sunshine, a bulging, uneven shaft rose a hundred feet sheer. It looked as solid as marble. Its purpose was unguessable. There was a huge, fan-shaped space where the vegetation about the rocket-ship was colored a vivid red. In air-photos, the rocket-ship would look remarkably like something from another planet. But nearby, Thorn could see a lazy trickle of fuel-fumes from a port-pipe on one side of the monster....

"That tower is nothing but cellate foam, which hardens. And Sylva! See?"

She came cautiously through the brushwood and looked down. She shivered a little. From here they could see beneath the bows of the rocket-ship. And there was a name there, in the Cyrillic alphabet which was the official written language of the Com-Pubs. Here, on United Nations soil, it was insolent. It boasted that the red ship came,
not from an alien planet, but from a nation more alien still to all the United Nations stood for. The Com-Pubs--the Union of Communist Republics--were neither communistic nor republics, but they were much more dangerous to the United Nations than any mere Martians would have been.

"We'll have some heavy ships here to investigate, soon," said Thorn grimly. "Then I'll signal!"

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He flung back his head. High up and far away, beyond that invisible barrier against which Watch-planes had flung themselves in vain, there were tiny motes in mid-air. These were Watch planes too, hovering outside the obstacle they could not see, but which even hexynitrate bombs could not break through. And very far away indeed there was a swiftly-moving small dark cloud. As Thorn watched, that cloud drew close. As his eyes glowed, it resolved itself into its component specks. Small, two-man patrol-scouts. Larger, ten-man cruisers of the air. Huge, massive dreadnaughts of the blue. A complete combat-squadron of the United Nations Fighting Forces was sweeping to position about the dome of force above the rocket-ship.

The scouts swept forward in a tiny, whirling cloud. They sheered away from something invisible. One of them dropped a smoking object. It emitted a vast cloud of paper, which the wind caught and swept away, and suddenly wrapped about a definite section of an arc. More and more of the tiny smoke-bombs released their masses of cloudlike stuff. In mid-air a dome began to take form, outlined by the trailing streaks of gray. It began to be more definitely traced by interlinings. An aerial lattice spread about a portion of a six-mile hemisphere. The top was fifteen thousand feet above the rocket-ship, twenty-five thousand feet from sea-level, as high as Mount Everest itself.

Tiny motes hovered even there, where the smallest of visible specks was a ten-man cruiser. And one of the biggest of the aircraft came gingerly up to the very inner edge of the lattice-work of fog and hung motionless, holding itself aloft by powerful helicopter screws. Men were working from a trailing stage--scientists examining the barrier even hexynitrate would not break down.

* * * * *

Thorn set to work. He had come toilsomely to the neighborhood of the rocket-ship because he would have to do visual signaling, and there was no time to lose. The dome of force was transparent. The air fleet would be trying to communicate through it with the Martians they believed were in the rocket-ship. Sunlight reflected from a polished canteen would attract attention instantly from a spot near the red monster, while elsewhere it might not be observed for a long time. But, trying every radio wave-band, and every system of visual signaling, and watching and testing for a reply, Thorn's signal ought to be picked up instantly.

He handed his pocket speech-light receptor to Sylva. It is standard equipment for all flying personnel, so they may receive non-broadcast orders from flight leaders. He pointed to a ten-man cruiser from which shone the queer electric-blue glow of a speech-light.

"Listen in on that," he commanded. "I'm going to call them. Tell me when they answer."

He began to flash dots and dashes in that quaintly archaic telegraph alphabet Watch fliers are still required to learn. It was the Watch code call, sent over and over again.

"They're trying to make the Martians understand," said Sylva unsteadily with the speech-light receiver at her ear.

* * * * *

Flash--flash--flash.... Thorn kept on grimly. The canteen top was slightly convex, so the sunlight-beam would spread. Accuracy was not needed, therefore. He covered and uncovered it, and covered and uncovered it....

"They answered!" said Sylva eagerly. "They said 'Thorn Hard report at once!'"

There was a hissing, roaring noise over the hillside, where the red rocket-ship lay. Thorn paid no attention. He began to spell out, in grim satisfaction:

"R-o-c-k-e-t s-h-i-p i-s--"

"Look out!" gasped Sylva. "They say look out, Thorn!"

Then she screamed. As Thorn swung his head around, he saw a dense mass of white vapor rushing over the hillside toward them. He picked Sylva up in his arms and ran madly....

The white vapor tugged at his knees. It was a variation of a vortex-stream. He fought his way savagely toward higher ground. The white vapor reached his waist.... It reached his shoulders.... He slung Sylva upon his shoulder and fought more madly still to get out of the wide white current.... It submerged him in its stinging, bitter flood.... As he felt himself collapsing his last conscious thought was the bitter realization that the bulbous white tower had upheld television lenses at its top, which had watched his approach and inspection of the rocket-ship, and had enabled those in the red monster to accurately direct their spurt of gas.

His next sensation was that of pain in his lungs. Something that smarted intolerably was being forced into his nostrils, and he battled against the agony it produced. And then he heard someone chuckle amusedly and felt the
curious furry sensation of electric anesthesia beginning....

* * * * *

When he came to himself again a machine was clicking erratically and there was the soft whine of machinery going somewhere. He opened his eyes and saw red all about him. He stirred, and he was free. Painfully, he sat up and blinked about him with streaming, gas-irritated eyes. He had been lying on a couch. He was in a room perhaps fifteen feet by twenty, of which the floor was slightly off-level. And everything in the room was red. Floor and walls and ceiling, the couch he had lain on and the furniture itself. There was a monstrous bulk of a man sitting comfortably in a chair on the other side of the room, pecking at a device resembling a writing-machine.

Thorn sat still for an instant, gaining strength. Then he flung himself desperately across the room, his fingers curved into talons.

Five feet, ten, with the slant of the floor giving him added impetus.... Then his muscles tightened convulsively. A wave of pure agony went through his body. He dropped and lay writhing on the floor, while the high-frequency currents of an induction-screen had their way with him. He was doubled into a knot by his muscles responding to the electric stimulus instead of his will. Sheer anguish twisted him. And the room filled with a hearty bellow of laughter.

The monstrous whiskered man had turned about and was shaking with merriment.

He picked up a pocket-gun from beside him and turned off a switch at his elbow. Thorn's muscles were freed. "Go back, my friend," boomed the same voice that had come from a speaker the night before. "Go to der couch. You amuse me and you haff already been useful, but I shall haff no hesitation in killing you. You are Thorn Hardt. My name is Kreynborg. How do you do?"

"Where's my friend?" demanded Thorn savagely. "Where is she?"

"Der lady friend? There!" The whiskered man pointed negligently with the pocket-gun. "I gafe her a bunk to slumber in."

* * * * *

There was a niche in the wall, which Thorn had not seen. Sylva was there, sleeping the same heavy, dreamless sleep from which Thorn himself had just awakened. He went to her swiftly. She was breathing naturally, though tears from the irritating gas still streaked her face and her skin seemed to be pinkened a little from the same cause.

Thorn swung around. His weapons were gone, of course. The huge man snapped on the induction-screen switch again and put down his weapon. With that screen separating the room into two halves, no living thing could cross it without either such muscular paralysis as Thorn had just experienced, or death. Coils in the floor induced alternating currents in the flesh itself, very like those currents used for supposed medical effects in "medical batteries," and "shockers."

"Be calm!" said Kreynborg, chuckling. "I am pleased to haff company. This is der loneliest spot in der Rockies. It was chosen for that reason. But I shall be here for maybe months, and now I shall not be lonely. We of der Com-Pubs haff scientific resources such as your fools haff nefer dreamed of, but there is no scientific substitute for a pretty woman."

He turned again to the writing device. It clicked half a dozen times more, and he stopped. A strip of paper came out of it. He inserted it into the slot of another mechanism and switched on a standard G.C. phone as the paper began to feed. In seconds the room was filled with unearthly hoots and wails and whistles. They came from the device into which the paper was feeding, and they poured into the G.C. transmitter. They went on for nearly a minute, and ceased. Kreynborg shut off the transmitter.

"My code," he observed comfortably, "gifing der good news to Stalingrad. Everything is going along beautifully. I roused der fair Sylva and kissed her a few times to make her scream into a record, and I interpolated her screamings into der last code transmission. Your wise men think der Martians haff vivisected her. They are concentrating der entire fighting force of der United Nations outside der dome of force. And all for a few kisses!"

* * * * *

Thorn was white with rage. His eyes burned with a terrible fury. His hands shook. Kreynborg chuckled again.

"Oh, she is unharmed--so far. I haff not much time now. Presently der two of you will while away der time. But not now."

He switched on the G.C. receiver and the room filled with a multitude of messages. Thorn sat beside Sylva, watching, watching, watching, while invisible machinery whined softly and Kreynborg listened intently to the crisp, curt official reports that came through on the Fighting Force band. Three combat-squadrons were on the spot now; One, Three and Eight. Four more were coming at fast cruising speed--four hundred miles an hour. One combat-squadron of the whole fleet alone would be left to cope with all other emergencies that might arise.... A television screen lighted up and Thorn could see where the lenses on the bulbous tower showed the air all about filled with fighting-planes, hovering about the dome of force like moths beating their wings against a screen. The strongest fighting-force in the world, helpless against a field of electric energy!
"It is amusing," chuckled Kreynborg, looking at the screen complacently. "Der dome of force is a new invention. It is a heterodyning of one frequency upon another at a predetermined distance. It has all der properties of matter except mass and a limit of strength. There is no limit to its strength! But it cannot be made except in a sphere, so at first it seemed only a defensif weapon. With it, we could defy der United Nations to attack us. But we wished to do more. So I proposed a plan, and I haff der honor of carrying it out. If I fail, Krassin disavows me. But I shall not fail, and I shall end as Commissar for der continent of North America!"

* * * * *

He looked wisely at Thorn, who sat motionless.

"You keep quiet, eh, and wait for me to say something indiscreet? Ferry well, I tell you. We are in a sort of gold-fish globe of electric force. Your air fleet cannot break in. You know that! Also, if they were in they could not break out again. So I wait, fery patiently pretending to be a Martian until all your Fighting Force has gathered around in readiness to fight me. But I shall not fight. I shall simply make a new and larger gold-fish globe, outside of this one. And then I go out and make faces at der Fighting Force of der United Nations imprisoned between der two of them--and then der Com-Pub fleet comes ofer!"

He stood up and put his hand on a door-knob.

"Is it not pretty?" he asked blandly. "In two weeks der air fleet will begin to starfe. In three, there will be cannibalism, unless der Com-Pubs accept der surrender. Imagine...." He laughed. "But do not fear, my friendt! I haff profundis for a year. If you are amusing, I feed you. In any case I exchange food for kisses with der charming Sylva. It will be amusing to change her from a woman who screams as I kiss her, to one who weeps for joy. If I do not haff to kill you, you shall witness it!"

He vanished through a doorway on the farther side of the room. Instantly Thorn was on his feet. The dead slumber in which Sylva was sunk was wholly familiar. Electric anesthesia, used not only for surgery, but to enforce complete rest at any chosen moment. He dragged her from that couch to his own. He saw her stir, and her eyes were instantly wide with terror. But Thorn was tearing the couch to pieces. Cover, pneumatic mattress.... He ripped out a loosely-fitting frame-piece of steel.

"Quick, now," he said in a low tone, "I'm going to short the induction-screen. We'll get across it. Then--out the door!"

* * * * *

She struggled to her feet, terrified, but instantly game. Thorn slid the rod of metal across the stretch of flooring he had previously been unable to cross. The induced currents in the rod amounted to a short-circuit of the field. The rod grew hot and its paint blistered smokily. Thorn leaped across with Sylva in his wake. He pointed to the door, and she fled through it. He seized a chair, crashed it frenziedly into the television screen, and had switched on the G.C. phone when there was a roar of fury from Kreynborg. Instantly there was the spitting sound of a pocket-gun and in the red room the racking crash of a hexynitrate pellet. Nothing can stand the instant crash of hexynitrate. Its concussion-wave is a single pulsation of the air. The cellate diaphragm of the G.C. transmitter tore across from its violence and Thorn cursed bitterly. There was no way, now, of signaling....

A second racking crash as a second pellet flashed its tiny green flame. Kreynborg was using a pocket-gun, one of those small terrible weapons which shoot a projectile barely larger than the graphite of a lead pencil, but loaded with a fraction of a milligram of hexynitrate. Two hundred charges would feed automatically into the bore as the trigger was pressed.

Thorn gazed desperately about for weapons. There was nothing in sight. To gain the outside world he had to pass before the doorway through which the bullets had come.... And suddenly Thorn seized the code-writer and the device which transmitted that code as a series of unearthly noises which the world was taking for Martian speech. He swung the two machines before the door in a temporary barrier. Whatever else Kreynborg might be willing to destroy, he would not shoot into them!

Thorn leaped madly past the door as Kreynborg roared with rage again. He paused only to hurl a chair at the two essential machines, and as they dented and toppled, he fled through the door and away.

* * * * *

Sylva peered anxiously at him from behind a huge boulder. He raced toward her, expecting every second to hear the spitting of Kreynborg's pocket-gun. With the continuous-fire stud down, the little gun would shoot itself empty in forty-five seconds, during which time Kreynborg could play it upon him like a hose that spouted death. But Thorn had done the hundred yards in eleven seconds, years before. He bettered his record now. The first of the little green flashes came when he was no more than ten yards from the boulder which sheltered Sylva. The tiny pellet had missed him by inches. Three more, and he was safe from pursuit.

"But we've got to get away!" he panted. "He can shoot gas here and get us again! He can cover four hundred yards with gas, and more than that with guns."
They fled down a tiny water-course, midget figures in an infinity of earth and sky, scurrying frenziedly from a red slug-like thing that lay askew in a mountain valley. Far away and high above hung the war-planes of the United Nations. Big ones and little ones, hovering in hundreds about the outside of the dome of force they could neither penetrate nor understand.

A quarter of a mile. Half a mile. There was no sign from Kreynborg or the rocket-ship. Thorn panted.
"He can't reach us with gas, now, and it looks like he doesn't dare use a gun. They'd know he wasn't a Martian. At night he'll use that helicopter, though. If we can only make those ships see us...."

They toiled on. The sun was already slanting down toward the western sky. At four--by the sun--Thorn could point to a huge air-dreadnaught hanging by lazily revolving gyros barely two miles away. He waved wildly, frantically, but the big ship drifted on, unseeing. The Fighting Force was no longer looking for Thorn and Sylva. They had been carried into the rocket-ship fourteen hours and more before. Sylva's screaming had been broadcast with the weird hoots and whistles the United Nations believed to be the language of inter-planetary invaders. The United Nations believed them dead. Now a watch was being kept on the rocket-ship, to be sure, but it was becoming a matter-of-fact sort of vigilance, pending the arrival of the rest of the Fighting Force and the cracking of the dome of force by the scientists who worked on it night and day.

On level ground, Thorn and Sylva would have reached the edge of the dome in an hour. Here they had to climb up steep hillsides and down precipitous slopes. Four times they halted to make frantic efforts to attract the attention of some nearby ship.

It was six when they came upon the rim. There was no indication of its existence save that three hundred yards from them boughs waved and leaves quivered in a breeze. Inside the dome the air was utterly still.
"There it is!" panted Thorn.

Wearied and worn out as they were, they hurried forward, and abruptly there was something which impeded their movements. They could reach their hands into the impalpable barrier. For one foot, two, or even three. But an intolerable pressure thrust them back. Thorn seized a sapling and ran at the barrier as if with a spear. It went five feet into the invisible resistance and stopped, shot back out as if flung back by a jet of compressed air.
"He told the truth," groaned Thorn. "We can't get out!"

Long shadows were already reaching out from the mountains. Darkness began to creep upward among the valleys. Far, far away a compact dark cloud appeared, a combat-squadron. It swept toward the dome and dissociated into a myriad specks which were aircraft. The fliers already swirling about the invisible dome drew aside to leave a quadrant clear, and Combat-Squadron Seven merged with the rest, making the pattern of dancing specks markedly denser.

"With a fire," said Thorn desperately, "they'll come! Of course! But Kreynborg took my lighter!"
Sylva said hopefully:
"Don't you know some way? Rubbing sticks together?"
"I don't," admitted Thorn grimly, "but I've got to try to invent one. While I'm at it, you watch for fliers."
He searched for dry wood. He rubbed sticks together. They grew warm, but not enough to smoke, much less to catch. He muttered, "A drill, that's the idea. All the friction in one spot." He tugged at the ring under his lapel and the parachute fastened into his uniform collar shot out in a billowing mass of gossamer silk, flung out by the powerful elastics designed to make its opening certain. Savagely, he tore at the shrouds and had a stout cord. He made a drill and revolved it as fast as he could with the cord....

A second dark cloud swept forward in the gathering dusk and merged into the mass of fliers about the dome. Five minutes later, a third. Dense as the air-traffic was, riding-lights were necessary. They began to appear in the deepening twilight. It seemed as if all the sky were alight with fireflies, whirling and swirling and fluttering here and there. But then the fire-drill began to emit a tiny wisp of smoke. Thorn worked furiously. Then a tiny flickering flame appeared, which he nursed with a desperate solicitude. Then a larger flame. Then a roaring blaze! It could not be missed! A fire within the dome could not fail to be noted and examined instantly!

A searchlight beam fell upon them, illuminating him in a pitiless glare. Thorn waved his arms frantically. He had nothing with which to signal save his body. He flung his arms wide, and up, and wide again, in an improvised adaption of the telegraphic alphabet to gesticulation. He sent the watch call over and over again....

A little cloud of riding-lights swept toward the dome from an infinite distance away. Darkness was falling so swiftly that they were still merely specks of light as they swept up to and seemed to melt into the swirling, swooping mass of fliers about the dome....

Cold sweat was standing out on Thorn's face, despite the violence of his exertions. He was even praying a
little.... And suddenly the searchlight beam flickered a welcome answer:
"W-e u-n-d-e-r-s-t-a-n-d. R-e-p-o-r-t."

Thorn flung his arms about madly, sending:
"G-e-t a-w-a-y q-u-i-c-k. C-o-m P-u-b-s h-e-r-e. W-i-l-l m-a-k-e o-t-h-e-r d-o-m-e o-u-t-s-i-d-e t-o t-r-a-p y-o-

The searchlight beam upon him flickered an acknowledgment. He knew what was happening after that. The
G.C. phones would flash the warning to every ship, and every ship would dash madly for safety.... A sudden,
concerted quiver seemed to go over the whirling maze of lights aloft. A swift, simultaneous movement of every ship
in flight. Thorn breathed an agonized prayer....

There was a flash of blue light. For one fractional part of a second the stars and skies were blotted out. There
was a dome of flame above him and all about the world, of bright blue flame which instantly was--and instantly was
not!

Then there was a ghastly blast of green. Hexynitrate going off. In this glare were silhouetted a myriad motes in
flight. But there was no noise. A second flare.... And then Thorn Hard, groaning, saw flash after flash after flash of
green. Monster explosions. Colossal explosions. Terrific detonations which were utterly soundless, as the ships of
the Fighting Force, in flight from the menace of which Thorn had warned them, crashed into an invisible barrier and
exploded without cracking it.

* * * * *

It was August 24th, 2037. For three days, now, seven of the eight great combat-squadrons of the United
Nations Fighting Forces had been prisoners inside a monstrous transparent dome of force. There was a financial
was in force in Chicago, in Prague, in Madrid, and in Buenos Aires. The Com-Pubs were preparing an ultimatum to
be delivered to the government of the United Nations. Thorn and Sylva were hunted fugitives within the inner dome
of force, which protected the red rocket-ship from the seven combat squadrons it had imprisoned. Newspaper
vendor-units were shrieking, "Air Fleet Still Trapped!" and a prominent American politician was promising his
constituents that if a foreign nation dared invade the sacred territories of the United Nations, a million embattled
private planes would take the air. And he seemed not even trying to be humorous! Scientists were wringing their
hands in utter helplessness before the incredible resistance of the dome. It had been determined that the dome was a
force-field which caused particles charged with positive electricity to attempt to move in a right-hand direction about
the source of the field, and particles charged with negative electricity to attempt to move in a left-hand direction.
The result was that any effort to thrust an external object into the field of force was an attempt to tear the negatively
charged electrons of every atom of that substance, free from the positively charged protons of nuclei. An object
could only be passed through the field of force if it ceased to exist as matter--which was not an especially helpful
discovery. And--Thorn Hard and Sylva were still hunted fugitives inside the inner dome.

* * * * *

The sun was an hour high when the helicopter appeared to hunt for them by day. After the first time they had
never dared light a fire, because Kreynborg in the helicopter searched the hills for a glow of light. But this day he
came searching for them by day. Thorn had speared a fish for Sylva with a stick he had sharpened by rubbing it on a
crumbling rock. He was working discouragedly on a little contrivance made out of a forked stick and the elastic
from his parachute-pack. He was haggard and worn and desperate. Sylva was beginning to look like a hunted wild
thing.

Two hundred yards from them the most formidable fighting force the world had ever seen littered the earth
with gossamer-seeming cellate wings and streamlined bodies at all angles to each other. And it was completely
useless. The least of the weapons of the air-fleet would have been a godsend to Thorn and Sylva. To have had one
ship, even the smallest, where they were would have been a godsend to the fleet. But two hundred yards, with the
dome of force between, made the fleet just exactly as much protection for Sylva as if it had been a million miles
away.

The droning hum of the helicopter came across the broken ground. Now louder, now momentarily muted, its
moments of loudness grew steadily more strong. It was coming nearer. Thorn gripped his spear in an instinctive,
utterly futile gesture of defense. Sylva touched his hand.

"We'd better hide."

They hid. Thick brush concealed them utterly. The helicopter went slowly overhead, and they saw Kreynborg
gazing down at the earth below him. Nearly overhead he paused. And suddenly Thorn groaned under his breath.

"It's the flagship!" he whispered hoarsely to Sylva. "Oh, what fools we were! The flagship! He knows the
General would have brought it to earth opposite us, to question us!"

* * * * *
The flagship was nearly opposite. To find the flagship was more or less to find where Thorn and Sylva hid. But they had not realized it until now.

The speaker in the helicopter boomed above their heads.

"Ah, my friends! I think you hear me. Answer me. I haff an offer to make."

Shivering, Sylva pressed close to Thorn.

"Der Com-Pub fleet is on der way," said Kreynborg, chuckling. "Sefen-eights of der United Nations fleet is just outside. You haff observed it. In six hours der Com-Pub fleet begins der conquest of der country and der execution of persons most antagonistic to our regime. But I haff still weary weeks of keeping der air fleet prisoner, until its personnel iss too weak from starfation to offer resistance to our soldiers. So I make der offer. Come and while away der weary hours for me, and I except you both from der executions I shall findt it necessary to decree. Refuse, and I get you anyhow, and you will regret your refusal fery much."

Thorn's teeth ground together. Sylva pressed close to him.

"Don't let him get me, Thorn," she panted hysterically. "Don't let him get me...."

* * * * *

The droning, monotonous hum of the helicopter over their heads continued. The little flying-machine was motionless. The air was still. There was no other sound in the world.

Silence, save for the droning hum of the helicopter. Then something dropped. It went off with an inadequate sort of an explosion and a cloud of misty white vapor reared upward on a hillside and began to settle slowly, spreading out.... The helicopter moved and other things dropped, making a pattern....

"The air's still," said Thorn quite grimly. "That stuff seems to be heavier than air. It's flowing downhill, toward the dome-wall. It will be here in five minutes. We've got to move."

Sylva seemed to be stricken with terror. He helped her to her feet. They began to move toward higher ground. They moved with infinite caution. In the utter silence of this inner dome, even the rustling of a leaf might betray them.

It was the presence of the air fleet within clear view that made the thing so horrible. The defenders of a nation were watching the enemy of a nation, and they were helpless to offer battle. The helicopter hummed and droned, and Kreynborg grinned and searched the earth below him for a sign of the man and girl who had been the only danger to his plan and now were unarmed fugitives. And there were four air-dreadnaughts in plain sight and five thousand men watching, and Kreynborg hunted, for sport, a comrade of the five thousand men and a woman every one of them would have risked or sacrificed his life to protect.

He seemed certain that they were below him. Presently he dropped another gas-bomb, and another. And then Sylva stumbled and caught at something, and there was a crashing sound as a sapling wavered in her grasp.... And Thorn picked her up and fled madly. But billowing white vapor spouted upward before him. He dodged it, and the helicopter was just overhead and more smoke spouted, and more, and more.... They were hemmed in, and Sylva clung close to Thorn and sobbed....

* * * * *

Five thousand men, in a thousand grounded aircraft, shouted curses that made no sound. They waved weapons that were utterly futile. They were as impotent as so many ghosts. Their voices made not even the half-heard whisper one may attribute to a phantom.

The fog-vapor closed over Thorn and Sylva as Kreynborg grinned mockingly at the raging men without the dome of force. He swept the helicopter to a position above the last view of Thorn and Sylva, and the downward-beating screws swept away the foggy gas. Thorn and Sylva lay motionless, though Thorn had instinctively placed himself in a position of defense above her.

The Fighting Force of the United Nations watched, raging, while Kreynborg descended deliberately into the area the helicopter-screws kept clear. While he searched Thorn's pockets reflectively and found nothing more deadly than small pebbles which might strike sparks, and a small forked stick. While he grinned mockingly at the raging armed men and made triumphant gesticulations before carrying Sylva's limp figure to the helicopter. While the little ship rose and swept away toward the rocket-plane.

It descended and was lost to view. Thorn lay motionless on the earth. Seven-eighths of the fighting force of the United Nations was imprisoned within the space between two domes of force no matter could penetrate. A ring two miles across and ten miles in outer diameter held the whole fleet of the United Nations paralyzed.

There was sheer panic through the Americas and Europe and the few outlying possessions of the United Nations.... And it was at this time, with a great fleet already half-way across the Pacific, that the Com-Pubs declared war in a fine gesture of ironic politeness. It was within half an hour of this time that the Seventh Combat Squadron--the only one left unimprisoned--dived down from fifty thousand feet into the middle of the Com-Pub fleet and went out of existence in twenty minutes of such carnage as is still stuff for epics.
The Seventh Squadron died, but with it died not less than three times as many of the foe. And then the Com-Pub fleet came on. Most of the original force remained; surely enough to devastate an undefended nation, to shatter its cities and butcher its people; to slaughter its men and enslave its women and leave a shambles and smoking ash-heaps where the very backbone of resistance to the red flag had been.

* * * * *

It was twenty minutes before Thorn Hard stirred. His lungs seemed on fire. His limbs seemed lead. His head reeled and rocked. He staggered to his feet and stood there swaying dully. A vivid light, brighter than the sunshine, played upon him from the flagship of the fleet which now was helpless to defend its nation. Thorn's befogged brain stirred dazedly as the message came.

"Com-Pub fleet on way. Seventh Combat-Squadron wiped out. Nation defenseless. You are only hope. For God's sake try something. Anything."

Thorn roused himself by a terrific effort. He managed to ask a question by exhausted gestures in the Watch visual alphabet.

"Kreynborg took her to rocket-ship," came the answer. "She recovered consciousness before being carried inside."

And Thorn, reeling on his feet and unarmed and alone, turned and went staggering up a hillside toward the rocket-ship's position. He could only expect to be killed. He could not even hope for anything more than to ensure that Sylva, also, die mercifully. Behind him he left an unarmed nation awaiting devastation, with a mighty air fleet speeding toward it at six hundred miles an hour.

As he went, though, some strength came to him. The fury of his toil forced him to breathe deeply, cleansing his lungs of the stupefying gas which, because it was visible as a vapor, had been carried in the rocket-ship. A visible gas was, of course, more consistent with the early pretense that the rocket-ship bore invaders from another planet. And Thorn became drenched with sweat, which aided in the excretion of the poisonous stuff. His brain cleared, and he recognized despair and discounted it and began to plan grimly to make the most of an infinitesimal chance. The chance was simply that Kreynborg had ransacked his pockets and ignored a little forked stick.

* * * * *

Scrambling up a steep hillside with his face hardened into granite, Thorn drew that from his pocket again. Crossing a hill-top, he stripped off his coat.

He traveled at the highest speed he could maintain, though it seemed painfully deliberate. An hour after he had started, he was picking up small round pebbles wherever he saw them in his path. By the time the tall, bulbous tower was in sight he had picked up probably sixty such pebbles, but no more than ten of them remained in his pockets. They, though, were smooth and round and even, perhaps an inch in diameter, and all very nearly the same size. And he carried a club in his hand.

He went down the last slope openly. The television lenses on the tower would have picked him out in any case, if Kreynborg had repaired the screen. He went boldly up to the rocket-ship.

"Kreynborg!" he called. "Kreynborg!"

He felt himself being surveyed. A door came open. Kreynborg stood chuckling at him with a pocket-gun in his hand.

"Ha! Just in time, my friend! I haff been fery busy. Der Com-Pub fleet is just due to pass in refiew abofe der welcoming United Nations combat-squadrons. I haff been gifing them last-minute information and assurance that der domes of force are solid and can hold forefer. I haff a few minutes to spare, which I had intended to defote to der fair Sylva. But--what do you wish?"

"I'm offering you a bribe," said Thorn, his face a mask. "A billion dollars and immunity to cut off the outer dome of force."

Kreynborg grinned at him.

"It is too late. Besides being a traitor, I would be assassinated instantly. Also, I shall be Commissar for North America anyhow."

"Two billion," said Thorn without expression.

"No," said Kreynborg amusedly. "Throw away der club. I shall amuse myself with you, Thorn Hardt. You shall watch der progress of romance between me and Sylva. Throw away der club!"

The pocket-gun came up. Thorn threw away the club.

"What do you want, if two billion's not enough?"

"Amusement," said Kreynborg jovially. "I shall be bored in this inner dome, waiting for der air fleet to starfe. I wish amusement. And I shall get it. Come inside!"

* * * * *

He backed away from the door, his gun trained on Thorn. And Thorn saw that the continuous-fire stud was
down. He walked composedly into the red room in which he had once awakened. Sylva gave a little choked cry at sight of him. She was standing, desperately defiant, on the other side of the induction-screen area on the floor. There was a scorched place on the floor where Thorn had shorted that screen and the bar of metal had grown red-hot. Kreynborg threw the switch and motioned Thorn to her.

"I do not bother to search you for weapons," he said dryly. "I did it so short a time ago. And you had only a club...."

Thorn walked stiffly beside Sylva. She put out a shaking hand and touched him. Kreynborg threw the switch back again.

"Der screen is on," he chuckled. "Console each other, children. I am glad you came, Thorn Hardt. We watch der grand refiew of der Com-Pub fleet. Then I turn a little infention of mine upon you. It is a heat-ray of fery limited range. It will be my method of wooing der fair Sylva. When she sees you in torment, she kisses me sweetly for der privilege of stopping der heat-ray. I count upon you, my friend, to plead with her to grant me der most extrafagant of concessions, when der heat-ray is searing der flesh from your bones. I feel that she is soft-hearted enough to oblige you. Yes?"

He touched a button and the repaired television-screen lighted up. All the dome of mountains and sky was visible in it. There were dancing motes in sight, which were aircraft.

"I haff remofed all metal-work from that side of der room," added Kreynborg comfortably, "so I can dare to turn my back. You cannot short der induction-screen again. That was clefer. But you face a scientist, Thorn Hardt. You haff lost."

A sudden surge of flying craft appeared on the television screen. The grounded fleet of the United Nations was taking to the air again. In the narrow, two-mile strip between the two domes of force it swirled up and up....

Kreynborg frowned.

"Now, what is der idea of that?" he demanded. He moved closer to the screen. The pocket-gun was left behind, five feet from his finger-tips. "Thorn Hardt, you will explain it!"

"They hope," said Thorn grimly, "your fleet can make gaps in the dome to shoot through. If so, they'll go out through those gaps and fight."

"Foolish!" said Kreynborg blandly. "Der only weapon we haff to use is der normal metabolism of der human system. Hunger!"

* * * * *

Thorn reached into his pocket. Kreynborg was regarding the screen absordely. Through the haze of flying dots which was the United Nations fleet, a darkening spot to westward became visible. It drew nearer and grew larger. It was dense. It was huge. It was deadly. It was the Com-Pub battle-fleet, nearly equal to the imprisoned ships in number. It swept up to view its helpless enemy. It came close, so every man could see their only possible antagonists rendered impotent.

Such a maneuver was really necessary, when you think of it. The Com-Pub fleet had encountered one combat-squadron of the United Nations fleet, and that one squadron, dying, had carried down three times its number of enemies. It was necessary to show the Com-Pub personnel the rest of their enemies imprisoned, in order to hearten them for the butchery of civilians before them.

Kreynborg guffawed as the Com-Pub fleet made its mocking circuit of the invisible dome. And Thorn raised his head.

"Kreynborg!" he said grimly. "Look!"

There was something in his tone which made Kreynborg turn. And Thorn held a little forked stick in his hand.

"Turn off the induction-screen, or I kill you!"

Kreynborg looked at him and chuckled.

"It is bluff, my friend," he said dryly. "I haff seen many weapons. I am a scientist! You play der game of poker. You try a bluff! But I answer you with der heat-ray!"

He moved his great bulk, and Thorn released his left hand. There was a sudden crack on Kreynborg's side of the room. A pebble a little over an inch in diameter fell to the floor. Kreynborg waivered, and toppled and fell. Three times more, his face merciless, Thorn drew back his arm, and three times Kreynborg's head jerked slightly. Then Thorn faced the panel on which the induction-screen switch was placed. Several times he thrust his hand through the screen and abruptly drew it back with pain, in an attempt to throw the switch. At last he was successful, and now he walked calmly across the room and bent over the motionless Kreynborg.

"Skull fractured," he said grimly. "All right, Sylva."

* * * * *

He went through the narrow doorway beyond, picking up the pocket-gun as he went. There was a noise of whining machinery. Now Thorn was emptying pellets into the mechanism that controlled the dome of force. There
was a crashing of glass. It stopped. There were blows and thumpings. That noise stopped too.

Thorn came back, his eyes glowing. He flung open the outer door of the rocket-ship, and Sylva went to him.

He pointed.

Far away, the Fighting Force of the United Nations was swirling upward. Like smoke from a campfire or winged ants from a tree-stump, they went up in a colossal, twisting spiral. Beyond the domes and above them. The domes existed no longer. Up and up, and up.... And then they swooped down upon the suddenly fleeing enemy. Vengefully, savagely, with all the fury of men avenging not only what they have suffered, but also what they have feared, the combat-squadrons of the United Nations fell upon the invaders. Green hexynitrate explosions lighted up the sky. Ear-cracking detonations reverberated among the mountains. There was battle there, and death and carnage and utter destruction. The roar of combat filled the universe.

Thorn closed the door and looked down at Kreynborg, who breathed stentorously, his mouth foolishly open.

"Our men will be back for us," he said shortly. "We needn't worry." Then he said, "Huh! He called himself a scientist, and he didn't know a sling-shot when he saw one!"

But then Thorn Hard dropped a weapon made of a forked stick and strong elastic from his chute-pack, and caught Sylva hungrily in his arms.

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**Contents**

**COLLECTIVUM**

By Mike Lewis

_The Oren were one and their strength was legion. They had it all figured out, in their own parasitical, cold-blooded way. But they'd neglected one she-cat of a girl...._
"Florida coast's getting to be lousy with them," she called.
"Orenians?"
"Yeah. Whole truckload of them passed through yesterday. On their way to Miami, I guess. One man said he saw an airplane yesterday."
"They must be reviving the industry up north."
"Yeah. Trucks by the dozen. Say--where've you been hiding?"
"Mangrove island. Been there six months."
"Get lonesome?"
"And tired of sitting still. Small island."
"You should have stayed--but I'm glad you didn't."

He shot her a sharp glance. She failed to look bereaved at the loss of her mate. But that was not unusual. Most marriages nowadays were contracted by brute force--and dissolved the same way. She probably felt that rolling the fat one in the drink gave her a claim on him.

When the last trace of gray fled from the west, they walked westward along the old highway beyond the limits of the coastal town which was now nearly deserted. They talked softly as they trudged along, and he learned that her name was Shera and that she had been a dancer in a small Miami nightspot, before the Orenians came. She had joined the fat one a year ago--because he owned a gun, and was therefore good insurance against wandering Orenians. But when the ammunition was gone, she tried to leave him, which resulted in the incident by the waterfront.

Morgan was irked that he had blundered into a family affair, and troubled that he had relieved the fellow of all worldly cares. Nevertheless, if the man had been stung, the free world would say--"job well done." For in a few weeks he would have ceased to be strictly human, becoming a dangerous threat to his fellows. And if the girl had been unable to escape from him before that time, she would have been subject to the same plight. Morgan decided that he would have done the same thing if given time to weigh the situation beforehand.

"How far are we going?" she asked.
"We're turning off on the next side-road," he grunted.
"You know the country?"
"I used to." He waved his arm to the south. "Road winds through a swamp, then climbs to high ground. Ends in a spruce forest."
"Got any food?"
"Will have, tomorrow. Ditches are full of warmouth perch. Plenty of swamp cabbage, wild oranges, bull frogs, papaya."
"I'm hungry now."
"That's tough."

She whimpered a little but soon fell silent. He saw she was limping, and he slowed his pace. Pity was a lost emotion in an age of chaos; but she was strong, healthy, and appeared capable of doing a day's work. He decided to humor her, lest she decide to trudge alone.

* * * * *

When they reached the swamp, branches closed over the narrow trail road, screening off the sky and hiding the thin slice of moon. The girl hung close to his elbow. A screech owl hooted in the trees, and a thousand frogs clamored in the blackness. Once the scream of a panther split the night, and the girl sobbed as if echoing the cry. They hurried ahead through the overgrown weeds.

"Drop flat!" he hissed suddenly.

She obeyed without a sound. They crouched together at the edge of the road, listening. A distant rustling came from the roadway to the south.

"Orenians?" she whispered.
"Orenians."
"How many?"
"Can't tell. They always march in step. Keep quiet."

Morgan gripped the hatchet and set himself for a quick spring. As they drew nearer, he decided that there were two of them. Their movements were perfectly coordinated, since they were of one mind, one consciousness--that of Oren. The girl tapped his arm with the blade of a knife.

"I'll take one," she breathed.

When the footsteps were almost upon them, Oren halted. There was no outcry; the Orenians had no need for vocal communication; their thought-exchange was bio-electromagnetic.
"Now!" howled Morgan, and launched himself at the enemy. His hatchet cleft the face of the nearest foe, and he turned instantly to help the girl. A pair of bodies thrashed about on the ground. Then she stood up, and he heard her dry the knife on some grass. It was over in an instant.

"Not stung?"
"No."
"That was too easy," he said. "I don't like it."
"Why?"
"They don't ambush that easy unless they're in rapport with another group someplace close. We'll have some more of them after us if we don't get away."

They hurried about the unpleasant task of splitting open the once-human skulls to remove the legless parasite-entities that filled the bony hollows where brains belonged. The Oren creatures lived in their stolen homes long after the borrowed body died, and they could signal others to the vicinity. Morgan tossed the globular little creatures in the ditch where they lay squeaking faintly--helpless, once-removed from the body of the host who had long since ceased to exist as a human being.

"Let's go!" he grunted.
"Same way?"
"Yeah."
"But they came from that way!"
"Have to chance it. Too dangerous, hanging around the highways. Out here we can find places to hide."

They set off at a trot, chancing an ambush in reverse. But Morgan reasoned that the Orenians had been returning to the highway after a day's exploring on the side-roads. After plunging for half-an-hour through the darkness, the road began winding upward. The cypress archway parted, revealing star-scattered sky. They slowed to a walk.

"Can't we sit down to rest?" she panted.
"Can if you like. Alone."
She shuddered and caught at his arm. "I'll stick."
"Sorry," he murmured. "We can stop soon. But they'll be chasing along the road looking for us. I want to get into the spruce forest first."
She was silent for a time, then said; "With Earlich, it was the other way around."
"Earlich? The fat boy? What do you mean?"
"I always had to wait on him."
"Did you wait?"
"Until he ran out of bullets."

Morgan clucked in mock disapproval. But he was not in the least shocked. In the flight from Oren, it was devil take the hindmost. Weaklings, and people who paused for pity, had long since been stung. After several weeks of agony in which the brain became the nutrient fodder of the growing Oren embryo, they were lost in the single communal mind of Oren, dead as individuals. The adult parasite assumed the bodily directive-function of the brain. The creatures so afflicted became mere cells in a total social organism now constituting a large part of humanity.

Shera suddenly whistled surprise. "Is that a cabin there?--through the trees?"
They had penetrated several hundred yards into the spruce. A black hulk lay ahead in a small clearing.
"Yeah," Morgan grunted. "I'd hoped it'd still be there."
She nudged him hard. "Close-mouthed, aren't you?"
"If I told you it was here, and then it was gone--how would you feel?"
"You think about things like that?" She stared at him curiously in the faint moonlight. "Nobody else does. Not now."
"Come on," he growled. "Let's see if it's occupied."

The door was locked. Morgan chopped it open without ceremony. The cabin was vacant except for a corpse on the floor. The corpse was of ancient vintage and slightly mummified. He noticed that it had killed itself with a shotgun--possibly because of an Oren-sting. He caught up the scarce weapon lest the girl grab it and run. Then he dragged the corpse out by the foot and left it under an orange tree. The oranges were green, but he picked a few to stave off the pangs of hunger.

When he returned, Shera had found matches and a lamp. She sat at a table, counting twelve-gauge shells.
"How many?"
"Even dozen." She gazed greedily at the gun. "I won't steal it."
He pitched her an orange and propped the gun in the corner. "If you did, it would be a mistake."
Her eyes followed him about the room as he inspected the meagre, dust-laden furnishings.
"I like you, Morgan," she murmured suddenly.
"Like you liked fat-boy?"
"He was a pig."
"But you liked his gun."
"You'd do all right without a gun."
"So?"
"Why don't we team up?"
"Whoa! We may not be looking for the same things."
She shrugged and toyed with the shells while she stared thoughtfully into the lamplight. "What's there to look for? Besides escape from Oren."
"Nothing maybe."
"But you think so, huh?"
He straightened suddenly and wagged a pair of cans over his head for her to see--beans, and a tin of tobacco.
He set them aside and continued searching the cupboards.
"But you think so, huh?" she repeated.
" Shut up and heat the beans."
Shera caught the can and speared it with her knife. It spewed. She sniffed, cursed, and threw them out. "We eat oranges."
"But what are you looking for, Morgan?"

* * * * *
He rolled himself a cigarette with the aged tobacco which was little more than dust. He came to the table and sat facing her. She had placed an orange before him. Almost absently he laid the blade of his hatchet atop it. The weight of it split the fruit neatly.
"Sharp," she muttered.
"Sharp enough to split Oren skulls."
"And that's all you're looking for?"
"I don't know. Ever hear of the Maquis?"
She hesitated. "Two wars ago? The French underground? I remember vaguely. I was a little urchin then."
"They had a goal like mine, I guess. To harass. They couldn't win, and they knew it. They killed and wrecked and maimed because they hated. I want to organize a band of Oren-killers--with no purpose save to ambush and slaughter. I sat on that island and thought and thought--and I got disgusted with myself for hiding."
The girl munched a cheekful of bitter orange pulp and looked thoughtful. "Wish I had some clothes," she muttered indifferently.

He shot her a hard glance then stood up to pace the floor. "Ambush, slaughter, and rob," he amended, and looked at her sharply again.
"Rob?"
"Oren's taken our cities. He's reorganizing industry. With individuals coordinated by a mass-mind, it'll be a different kind of industry, a more efficient kind. Think of a factory in which a worker at one position shares consciousness with a worker in another position. Does away with control mechanisms."
"You said 'rob'."
He grinned sourly. "When they get production started, there'll be plenty to steal. Guns; explosives--clothes."
She nodded slowly. "Trouble is: every time you kill an Orenian, they all feel him die. They come running."
"Sometimes. Unless they're too busy. They don't care too much about individual deaths. It's the total mental commune of Oren that matters. Like now. They could find us if they really tried. But why should they? They'd come as recruiting agents--with bared stingers--if they came."
"They'll come tomorrow," she said fatalistically.
"We'll try to be ready."

* * * * *
She inspected him carefully, as if weighing his size and strength. "I still want to team up with you."
He recalled how quickly she had knifed the Orenian to death on the road. "Okay--if you'll follow me without argument."
"I can take orders." She folded her arms behind her head and leaned back with a grin. Her breasts jutted haughtily beneath a torn blouse. "Most orders, that is."
"Hell, I'm not marrying you!" he snapped.
She laughed scornfully. "You will, Morgan, you will."
Morgan lashed the shotgun to a chair, aimed it at the door, and ran a length of cord from the trigger to the
shattered lock. "Don't trip over the cord in the night," he warned as he blew out the lamp. Then he bedded down in the corner on the floor.

A short time later he heard her sobbing softly. "What the devil's wrong?" he snarled disgustedly.

"Thanks, Morgan--thanks," she whispered.

For a moment he felt sorry for her. Apparently she was thanking him for the bed. Fat boy had evidently taken the best of everything and given her the crumbs of Lazarus. Such were the mores of chaos. But Morgan quit congratulating himself. He had chosen the floor because it looked cleaner than the bed.

He was awakened before dawn by the rapid sputter of rain on the roof. It dribbled through several holes and spread across the floor. He sat up shivering. Shera was a glowing cigarette near the window.

"Can't sleep?" he asked.

"I'm scared," she answered.

Faintly he could see her profile silhouetted against the pane. She was watching outside the cabin.

"I've got a funny feeling--that something's out there."

"Heard anything?"

"Just a feeling."

Morgan felt ice along his sides. "Shera--do you get hunches, feelings, intuitions very often?" His voice was hushed, worried.

"Yeah."

"Have you always?"

"No--I don't think I used to."

He was silent for a long time; then he hissed, "Are you sure you haven't been stung recently?"

Another brief silence. Then the girl laughed softly. A wave of prickles crept along his scalp.

"I've got the shotgun in my lap, Morgan."

* * * * *

"How long?" he whispered in horror.

"Six months."

"Six months! You're lying! You'd be fully depersonalized! You'd be in complete liaison with Oren!"

"But I'm not. Sometimes I can feel when they're near. That's all."

"But if it were true--your brain would be replaced by the parasite!"

"I wouldn't know. Apparently it's not."

Morgan couldn't believe it. But he sat stunned in the darkness. What was this thing in the cabin with him? Was she still human? He began inching along the wall, but a board creaked.

"I don't want to shoot you, Morgan. Don't rush me. Besides--there's something outside, I tell you."

"Why should you worry about that?--if you've really been stung."

"The first sting evidently didn't take. The next one might. That's why."

"You weren't sick?"

"During the incubation period? I was sick. Plenty sick."

Morgan shook his head thoughtfully. If she had been through the violent illness of the parasite's incubation, she should now have one of the squeaking little degenerates in place of a brain. The fibers of the small animals grew slowly along the neural arcs, replacing each nerve cell, forming a junction at each synapse. There was reason to believe that the parasite preserved the memories that had been stored in the brain, but they became blended with all the other individualities that comprised Oren, thereby losing the personality in the mental ocean of the herd-mind. Was it possible that if one invader were out of mental contact with the herd-mind, that the individual host might retain its personality? But how could she be out of contact?

"They're getting close to the door," she whispered.

Morgan gripped his hatchet and waited, not knowing who would be the greater enemy--the girl or the prowlers. "When the door opens, strike a match. So I can see to shoot."

Morgan crouched low. There came a light tapping at the torn screen, then several seconds of silence. Someone pushed at the door. It swung slowly open.

"Jerry?" called a faint voice. "Jerry--thet you in theah?"

Morgan breathed easily again. An Orenian would not have called out. "Who is it?" he barked.

There was no answer. Morgan groped for the lamp, found it, and held the match poised but not lighted.

"Come in here!" he ordered. "We've got a gun."

"Yes, suh!"

A shadow appeared in the door frame. Morgan struck the match. It was an ancient Negro with a burlap sack in one hand and a bloodstained pitchfork in the other. He stood blinking at Shera's shotgun and at the lamp as Morgan
lit it. His overalls were rainsoaked, his eyes wild.
"Come in and sit down."
"Thankya suh, thankya." He shuffled inside and slumped into a rickety chair.
"What're you doing wandering around like this?"
"Been a hunting. Yes, suh, been doing me a little hunting." He sighed wearily and mopped the rain out of his
tight coils of graying hair.
Morgan eyed the burlap sack suspiciously. It was wet, and it wriggled. "What's that?"
"'Ass my night's work," said the man and jerked a corner of the sack. It opened, and three Oren parasites spilled
out with weak squeaks of anguish.
The girl gasped angrily. "They're still in contact with Oren. Kill them!"
"Yes'm, they're in contact--but without eyes, how're they gonna know wheah they are?"
Morgan made a wry mouth at Shera. The old man was smart--and right. But he felt another uneasy suspicion.
The old man said "hunting." Hunting for what--food? The idea twisted disgust in Morgan's stomach.
"What're you going to do with them?"
"Oh--" The oldster kicked one of them lightly with his toe. The pink thing rolled against the wall. There were
vestigial signs of arms, legs, but tiny and useless, grown fast to the body. The visitor glanced up with a sheepish
grin.
"I feed 'em to my dawgs, suh. Dawgs like 'em. Getting so my dawgs can smell the difference twixt a man and
an Orenian. I'm training 'em. They help me with my hunting."
Morgan sat up sharply. "How many dogs you got, and where do you live?"
"Fo' dawgs. I live in the swamp. They's a big hollow cypress--I got my bed in it."
"Why didn't you move in here?"
The old man looked at the place in the center of the floor where the dust outlined the shape of a human body.
"Suicide," he muttered. Then he looked up. "'Tain't superstition, exactly. I just don't--"
"Never mind," Morgan murmured. He glanced at the girl. She had laid the shotgun aside and was lighting a
cigarette. He tensed himself, then sprang like a cat.
The gun was in his hands, and he was backing across the room before she realized what had happened. Her face
went suddenly white. The old man just sat and looked baffled.
"Can you call one of your dogs?"
"Yes, suh, but--"
"Call one, I want to try something."
Shera bit her lip. "Why, Morgan? To see if what I said is true?"
"Yeah."
"I'll save you the trouble." She stared into his face solemnly and slowly opened her mouth. From beneath her
tongue, a barb slowly protruded until its point projected several inches from her lips. Morgan shivered.

* * * * *

The Negro, who was sitting rigidly frozen, suddenly dove for his pitchfork with a wild cry. "Witcherwoman! Oren-stinger!"
Shera darted aside as the pitchfork sailed toward her and shattered the window. She seized it quickly and held
him at bay. The old man looked startled. Orenians tried to sting, not to fight.
"Hold it!" bellowed Morgan. Reluctantly, the oldster backed away and fell into the chair again. But his eyes clung to the girl with hatred.
"She stung ya, suh?"
"No, and she won't sting you." He gazed at Shera coldly. "Drop that fork."
She propped it against the wall but stayed close to it. "Okay, Morgan," she purred. "It's your show."
"It's going to be yours. Sit down and tell us everything that happened before you were stung and after. I want to
figure out what makes you different from the others, and why you aren't in liaison with Oren."
She smiled acidly. "You won't believe it."
"You'll tell it though," he growled darkly.
She turned to gape at the door. "Earlich had a little girl--by his first wife. She got stung eight months ago.
Before she ran away, she stung her pet kitten. I didn't know it. The kitten stayed with us. It stung me." She paused.
"Here's the part you won't believe: before Earlich killed it, I was coming into liaison with the cat."
"God!"
"It's true."
"Have you ever stung anyone?"
"No. Earlich didn't even know."
"Any desire to?"
She reddened slowly and set her jaw.
The old man giggled. "Wants ta sting a cat, ah bet, suh."
She shot him a furious glance, but didn't deny it. They sat for a long time in silence. Morgan lowered the shotgun, then laid it aside.
"Thanks," she murmured, and looked really grateful.
But Morgan was staring thoughtfully at the oldster. "Your dogs ever tree a panther?"
"Yas, suh, they're good at that!" He grinned and waggled his head.
"Many panthers in the swamp?"
"Lo'dy, yes--" He paused. His eyes widened slightly.
Both of them looked suddenly at the girl. Her eyebrows arched, her mouth flew open. She put a frightened hand to her throat.
"Oh no! Oh God, nooo!" she shrilled.
Morgan glanced at the window, sighed, and stood up.
"It's getting light outside. We better hunt some food."
Morgan and the old man, whose name was Hanson, went out to prowl along the outskirts of the swamp. They returned at mid-morning with a string of perch, a rabbit, and a heart of swamp cabbage. The girl cooked the meal in silence, scarcely looking at them. Her face was sullen, angry. Morgan turned while he was eating and saw her staring contemplatively at the back of his neck—where the Oren-sting was usually planted.
"Nobody's going to force you into anything, Shera," he said quietly. "We won't mention it again."
She said nothing, but stopped glaring at him. He wondered how much the Oren organ had affected her personality.
"Do you still feel the same—as you did a year ago?" he asked her. "Any difference? Any loss of memory? Loss of function?"
"No."
"That means the alien organ exactly duplicates the neural circuits it supplants."
"So?"
"So the rapport is the only special feature. Without it, you're apparently still human."
"Thanks." It was a bitter, acid tone.
"I can't understand why the cat-business caused ... unless ... rapport is achieved by a sort of resonance—and you couldn't get it with a cat and with humans too--"
"Drop it, will you!" She turned and stalked out of the shanty. At the doorway, she broke into a run.
Morgan looked at Hanson. Hanson waggled his head and grinned ruefully. "That—uh—lady likes you, suh."
Morgan snorted and went to the door. She was just disappearing into a tangle of weeds that had once been an orange grove. He set off after her at a quick trot. "Shera, wait—"
He caught up with her at the edge of the swamp, where she was backing quickly away from a coiled water-moccasin. He tossed a stick at the snake, and it slithered into the shallow water. Then he caught her arms, and she whirled to face him with defiant eyes.
"You think I'm a--a--"
"I don't."
"You act like I'm barely human."
"I didn't mean it that way--"
"You don't even trust me, and you want me to--"
"I don't."
"Trust me." She nodded.
"I do."
She stamped her foot in the soft muck. "Then kiss me."
A grim possibility occurred to him, and he hesitated an instant too long. She wrenched herself free with a snarl and bolted back toward the shanty. "I could have done that last night," she snapped over her shoulder, "while you were asleep."

* * * * *

The chase led back to the house. When he burst back inside, she was already panting over the sink, scraping plates. When he approached her from behind, she whirled quickly, clenching a platter in both hands. When she brought it down across his head with a clatter of broken china, Morgan gave up. He retreated, nursing his scalp, then stalked angrily out to join Hanson. Dogs were baying to the north. The old man looked worried.
"They're comin', suh. Must be a lot of 'em. I got my dawgs trained so they don't bark less they's a bunch of
Morgan listened for a moment. "I hear a truck."
"That's so?" Hanson shook his head. "They ain't never come in a truck before."
"Truck--must be a dozen of them at least." He eyed Hanson sharply. "Run or fight?"
The old man scratched his toe in the dirt. "Ain't never yet run from a fight."
Morgan turned silently and strode back in the house for the gun. Shera ignored him. "Orenians coming," he grunted, and went back out to join the oldster.
Morgan and Hanson trotted through the scrub spruce, heading for the roadway. But they turned short and cut north through the edge of the brush. Morgan caught a glimpse of the truck far ahead. Hanson's hounds were snarling about the wheels and leaping up toward the bed. The road was soft sand to their right. Ducking low, they darted ahead until it appeared firm enough to admit the truck.
"We want them to get past us," he hissed to Hanson. "When they do, you stand up and show yourself. When they start piling out, I'll start shooting. Okay?"
"Yes, suh." He patted his pitchfork and grinned. They stopped and crouched low in the brush.
"Please, suh--don't hit my dawgs."
"I'm counting on them to help."
The truck grumbled slowly past them. The hounds were snapping furiously as they tried to leap over the tailgate. Morgan caught a glimpse of white faces, staring fixedly at nothing. Then he nudged the oldster.
Hanson stood up, shaking his pitchfork and shrieking hate at the occupants. The truck moved on a few yards, then ground to a stop.
"Come and join us," thundered a collective voice. "For we are Oren, who is one."
"From the stars comes Oren. To the stars he goes. Come and join us."
"Come get me, you devils. I'll kill ya!"
"Oren is millions. He cannot die. We come."
Hanson's foot nudged Morgan's nervously. Still he lay under cover, waiting for their advance. Feet shuffled on the bed of the truck. The hounds were going wild. There was something weird about sounds of Orenian movement. It was always coordinated--so many marionettes with one set of controls. But they could shift from parallel coordination to complementary, dovetailing each set of movements to achieve the common purpose.
Morgan burst forth from the brush and fired at the tight group of bodies near the back of the truck. They were packed in a circle to protect the group from the slashing fangs of the dogs. Two of them fell, without outcries. He fired three times before they broke apart. There were still at least eight of them, but the dogs had two down.
"Oh, God! Children!" Morgan bellowed. "Call off the dogs!"
"Not human children."
* * * * *
"Call them off!"
Hanson obeyed reluctantly. A pair of calm-eyed child-things scrambled to their feet and began advancing with the group of adults. The Orenians fanned out and began closing in like the fingers of a giant fist. Morgan shot four of them before the circle closed to hatchet range. He and Hanson stood back to back, slashing out at the ring of fanged faces.
The attackers were weaponless. They cared nothing for individual bodies. The collectivum swayed, writhed, darted in--and fell in blood. The wounded crawled close to their ankles, barbs protruding from their lips. They roared constantly, "Oren is paradise. Come to Oren."
A child, who had been rescued from one of the dogs, crawled among the legs of the adults and lunged for Morgan's feet. He was forced to kick it back with a hard heel.
Suddenly their ranks broke. There were only four of them left standing. They backed away and stopped--three men and a middle-aged woman. "Oren will return." They turned and marched toward the truck.
"We need the truck," panted Morgan.
Hanson flung his pitchfork and caught the last one in the center of the back. The others moved on unheeding. Morgan sadly lifted the shotgun.
When it was over, they went to look at the two child-things. One was unconscious, but not badly wounded. The other had a broken arm. It shot out its fang and circled. With a sick heart, Morgan lashed out and caught it by the hair, before it could sting him.
"See if there's pliers in the truck," he muttered.
* * * * *
Hanson returned with them after a moment's rummaging. They jerked out its fang and let it go. It walked
calmly to the north, purpose defeated. They did the same to the other.

"It's crazy," he was gasping. "Stark crazy. They spend over a dozen Orenians just to get two of us. And they
didn't want to kill us at that."

"Lo'dy, suh! Who is Oren? You know?"

Morgan shook his head. "He's the collectivum, Han."

"But suh--he had to come from some place. People weren't like this--"

"Yeah. I guess he came from space, like they say."

"Just them little pink brain-gobblers?"

"Uh-uh! Scientists figure they came in some alien host. The hosts couldn't take Earth conditions. They stung a
few humans and died."

"Anybody ever see 'em?"

"Not that I know of. Nor found their ships."

"O Lo'dy, I'm sick, suh."

"Let's go back to the shanty, Han."

"Yes, suh. Look on the back o' my neck, will you suh?"

Morgan looked, then turned slowly away.

"Is it, suh?"

Morgan took a deep breath. "I--I--guess--"

"I stumbled once. I guess he got me then."

Morgan laid a hand on the old man's arm. There was nothing to say.

"Mistuh Morgan--would you do me a favo'?"

Morgan knew what he wanted. "I can't shoot you, Han. I'll leave you the gun, though."

"No, suh, that ain't it. I was wondering--could you help me catch a painter tonight--before I go?"

"A panther?" Morgan squeezed his arm and blinked hard. He grinned. "Sure, Han."

"Guess it'll be two, three days afore it starts happening to me."

"Yeah. Will you want the gun?"

"No, suh, don't think much of suicide. I'll just go out and wrestle me a 'gator in the swamp."

They went back to the house. Shera was sitting on the step.

"I've made up my mind," she said dully.

"About what?"

"I'll do it."

She got up and walked away. When Morgan tried to follow, she turned and flicked out the barb at him, then
laughed coldly. Shivering, he turned away.

That night the dogs treed a panther, and Hanson died. It happened while he was climbing with pole and rope,
angling to get a noose on the lithe beast while Morgan waited with another rope below. The lantern was hung from a
branch while Hanson inched out on the limb. When he thrust the noose forward, the panther brushed it aside with a
quick slap. It leaped. Hanson lost his balance and crashed to the ground with a howl. The panther slapped a dog
spinning and darted away in the night with three dogs following.

Morgan knelt quickly beside the old man. His back was broken.

"Please, suh--don't move me. The Lo'd's a-comin' fo' old Han."

"Hush, fellow," Morgan murmured.

"Suh, that painter's a she. And they's cubs somewheres."

"Cubs?"

"Yes, suh. She's spooky-like. Cubs. You stay with my dawgs. Take care of 'em, suh."

"Sure, Han."

"You lemme be now, suh. Lemme be alone." His voice was a faint whisper. "I gotta die by myself. Man
oughtn't to have company then."

Morgan hesitated. He sighed and climbed slowly to his feet. He stumbled away, leaving the lantern hanging
overhead. He sat a hundred yards away in the shadow of a gaunt cypress, listening to the baying of the hounds, the
moaning of the old man, and the croaking of the swamp. When he returned, the oldster was dead.

Morgan returned to the shanty at dawn, carrying a pair of whimpering panther cubs and the skin of the mother.
He exchanged a dark glance with Shera at the door. She took them silently and fondled them for a moment.

"Hanson's dead."

She nodded gravely. "Soon there'll be no one but Oren."

"The collectivum."

They went inside and sat facing one another. His eyes moved over the dark slope of her shoulders, the proud set
of her breasts, and back to the sweetly sullen face with its narrow eyes.

"I'm going to join you," he said.

The eyes widened a little. She shook her head quickly. "In a liaison of two? No. It might spread, get linked up
with Oren."

"Not if it's through these." He stroked one of the cubs. It snarled.

"It's a chance."

"We'll take it." He leaned forward to kiss her....

* * * * *

A year had passed since the night of Hanson's death. A freight train dragged southward in the twilight, wending
its way through pine forest and scrubland. Oren was its crew. It crossed a trestle and moved through a patch of
jungle. A sudden shadow flitted from the brush, leaped the ditch, and sprinted along beside the rails. Another
followed it, and another. The low-flying shadows slowly overtook the engine. The leader sprang, clung for a
moment by its forepaws, and pulled itself aboard. Brakes howled on the rails as Oren stopped the train. Two man-
figures leaped from the cab--and into the jaws of a killer-cat.

Another cat scrambled upon the tender, leaped to the top of a box-car and sped backward along the train to seek
the rest of the crew. The bodies were left in the ditches.

When it was over, the cats collected in a group on the road-bed. They sat licking their forepaws while a dozen
shabbily dressed guerrillas moved out of the jungle in a disorderly band.

"Joe, have your bunch unload the dynamite!" bawled a burly leader. "We'll take the tank-car. Emmert, get the
packs on those carts."

"I wonder," said a voice to a comrade, "who's controlling those animals. You'd think they were Oren. Why
don't they sting?"

"Stingers ripped out, chum. Why ask questions? They're on our side. And we'll win, eventually--if this keeps
up."

* * * * *

As a group, the panthers looked at the two men as they passed. One of them shuddered.

"Lordy! I'd swear those cats were grinning!"

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Contents

TULAN
By C. C. MacAPP

To disobey the orders of the Council of Four was unthinkable to a Space Admiral of the old school. But the
trouble was, the school system had changed. A man, a fighter, an Admiral had to think for himself now, if his people
were to live.

While facing the Council of Four his restraint had not slipped; but afterward, shaking with fury, the Admiral of
the Fleets of Sennech slammed halfway down the long flight of stone steps before he realized someone was at his
elbow. He slowed. "Forgive me, Jezeff. They made me so mad I forgot you were waiting."

Jezeff (adjutant through most of Tulan's career, and for some years brother-in-law as well) was shorter and less
harshly carved than his superior. "So they wouldn't listen to you. Not even Grefen?"

"Even Grefen." That vote had stabbed deepest of all.

Jezeff took it with the detachment that still irritated Tulan. "The end of a hundred years of dreams; and we go
back under the yoke. Well, they've always been soft masters."

They reached the ground cars. Before getting into his own Tulan said coldly, "Since you're so philosophical
about it, you'll be a good one to bear the sight of men saying good-bye to their families. We're to take full crews to
Coar and surrender them with the ships. Requisition what help you need and get everybody aboard by noon
tomorrow."

Jezeff saluted with a hint of amused irony, and left.

* * * * *

Whipping through the dark icy streets, Tulan smiled sourly, thinking how Sennech's scientists had reversed
themselves on the theory of hyperspace now that Coar had demonstrated its existence. Maybe the Council was right
in mistrusting their current notions. As for himself, he saw only two things to consider: that with Coar swinging
behind the sun, the accuracy of her new weapon had gone to pot; and that before she was clear again he could pound
her into surrender.

His swift campaigns had already smashed her flabby fleets and driven the remnants from space, but the Council, faced with the destruction and casualties from just a few days of the weird surprise bombardment, was cowed.

He'd spent the previous night at home, but wasn't going back now, having decided to make his farewell by visiphone. It was the thing he dreaded most, or most immediately, so as soon as he reached the flagship he went to his quarters to get it over with.

Anatu's eyes--the same eyes as Jezef's--looked at him out of the screen, filling him with the familiar awkward worship. "You've heard?" he asked finally.

"Yes. You won't be home before you go?"

"No; I ..." He abandoned the lie he'd prepared. "I just didn't feel up to it."

She accepted that. "I'll wake the boys."

"No! It's--" Something happened to his throat.

She watched him for a moment. "You won't be back from Coar. You've got to speak to them."

He nodded. This wasn't going according to plan; he'd intended it to be brief and controlled. Damn it, he told himself, I'm Admiral of the Fleets; I've no right to feelings like this. He straightened, and knew he looked right when the two sleepy stares occupied the screen.

Their hair was stiff and stubborn like his own, so that they wore it cropped in the same military cut. It could have stood a brush right now. They were quiet, knowing enough of what was wrong to be frightened.

He spoke carefully. "I'm going to Coar to talk to them about stopping the war. I want you to look after things while I'm away. All right?"

"All right, Dad." The older one was putting on a brave front for the benefit of the younger and his mother, but the tears showed.

As Tulan cut the connection he saw that Anatu's eyes were moist too, and realized with surprise that he'd never before, in all the years, seen her cry. He watched the last faint images fade from the screen.

* * * * *

Sometime near dawn he gave up trying to sleep, dressed, and began composing orders. Presently Jezef came in with cups of steaming amber liquid. They sipped in silence for a while, then Jezef asked "You've heard about Grefen?"

Tulan felt something knot inside him. He shook his head, dreading what he knew was coming.

"He killed himself last night," Jezef said.

Tulan remembered the agony in the old Minister of War's eyes when he'd voted for surrender. Grefen had been Admiral in his day; the prototype of integrity and a swift sledgehammer in a fight; and Tulan's first combat had been under him. A symbol of the Fleet, Tulan reflected; and his death, yes, that too was a symbol--what was there but shame in surrender, for a man or a fleet or a world?

His hand clenched, crumpling the paper it was resting on. He smoothed the paper and re-read the order he'd been writing. He visualized the proud ranks of his crewmen, reduced to ragged lines shuffling toward prison or execution.

It seemed impossible, against the laws of nature, that men should strive mightily and win, then be awarded the loser's prize. His anger began to return. "I've a mind to defy the Government and only take skeleton crews," he said. "Leave the married men, at least."

Jezef shrugged. "They'd only be bundled into transports and sent after us."

"Yes. Damn it, I won't be a party to it! All they did was carry out their orders, and superbly, at that!"

Jezef watched him with something like curiosity. "You'd disobey the Council? You?"

Tulan felt himself flush. "I've told you before, discipline's a necessity to me, not a religion!" Nevertheless, Jezef's question wasn't unfair; up to now it really hadn't occurred to him that he might disobey.

His inward struggle was brief. He grabbed the whole pad of orders and ripped them across. "What's the Council, with Grefen gone, but three trembling old men? Get some guns manned, in case they get suspicious and try to interfere."

Blood began to surge faster in his veins; he felt a vast relief. How could he have ever seen it differently? He jabbed at a button. "All ships' Duty Officers; scramble communication circuits. This is the Admiral. Top Secret Orders...."

* * * * *

Shortly before noon the four-hundred-odd ships lifted out of Sennech's frosty atmosphere, still ignoring the furious demands from the radio. Fully armed, they couldn't be stopped.

Tulan's viewer gave a vivid picture of the receding fifth planet. The white mantle of ice and snow was a
That had been before the First Solar War, when Teyr (the race of Aum had originated there) ruled. That awful struggle had bludgeoned the home planet back to savagery, and left Coar and Sennech little better off.

Within Tulan's lifetime his world had found itself ready to rise against the lax but profit-taking rule of Coar, and that rebellion had grown into the present situation.

Sennech's wounds were plainly visible in the viewscreen; great man-made craters spewing incandescent destruction blindly over farm, city, or virgin ice. The planet was in three-quarters phase from here, and Tulan could see the flecks of fire in the darkness beyond the twilight zone. Near the edge of that darkness he made out the dimmer, diffused glow of Capitol City, where Anatu would be giving two small boys their supper.

He checked altitude, found they were free of the atmosphere, and ordered an acceleration that would take them halfway to the sun in fifty hours. It was uncomfortable now, with Sennech's gravity added, but that would fall off fast.

Jezef hauled himself in and dropped to a pad. "I wish I had your build," he said. "Do you really think we can pull this off?"

"Have I ever led you into defeat yet, pessimist?"

"No; and more than once I'd have bet ten to one against us. That's why the Fleet fights so well for you; we have the feeling we're following a half-god. Gods, however, achieve defeats as terrible as their victories."

Tulan laughed and sat down beside Jezef with some charts. "I think I'll appoint you Fleet Poet. Here's the plan. No one knows what I intend; we could be on our way around the sun to overtake Coar and either fight or surrender, or we might be diving into the sun in a mass suicide. That's why I broke off the siege and pulled all units away from Coar; the fact that they're coming back around to meet us will suggest something like that."

"Are they going to join up?"

"No; I want them on this side of the sun but behind us. I have a use for them later that depends on their staying hidden. Incidentally, I'm designating them Group Three."

"In a few hours we're going to turn hard, this side of the sun, and intercept Teyr. I want to evacuate our forces from the moon, then decoy whatever the enemy has there into space where we can get at them. That's their last fleet capable of a sortie, and with that gone we can combine our whole strength and go around to Coar. She'll probably give up immediately, on the spot."

Jezef thought it over. "Will they be foolish enough to leave the moon? As long as they're safely grounded there, they constitute a fleet-in-being and demand attention."

"We'll give them a reason to move, then ambush them. Right now we've a lot of reorganizing to do, and I want you to get it started. We're splitting this Force into Groups One and Two. Here's what I want."

They cut drives and drifted in free fall while supplies were transferred between ships, then Tulan held an inspection and found crews and equipment proudly shipshape. Despite the proliferating rumors, morale was excellent.

A few hours later the realignment began. Space was full of the disc-shapes; thin, delicate-looking Lights with their projecting external gear, and thicker, smoothly armored Mediums and Heavies. He had twenty-three of the latter in Group One, with twice as many Mediums and a swarm of smaller craft.

Group Two, composed of the supply ships and a small escort, was already formed and diverging away. That was a vital part of his plan. From a distance they'd look to telescope or radar like a full combat fleet.

He was almost ready to swerve toward the third planet and its moon, but first he had a speech to make. It was time to squash all the rumors and doubts with a dramatic fighting announcement.

He checked his appearance, stepped before the scanner, and nodded to Communications to turn it on. "All hands," he said, then waited for attention.

The small monitor screens showed a motley sampling of intent faces. He permitted himself a tight smile. "You know I have orders to surrender the Fleet." He paused for effect. "Those are the orders of the Council of Four, and to disobey the Council would be unthinkable.

"Yet it is also unthinkable that a single ship of the Fleet should surrender under any circumstances, at any time; therefore I am faced with a dilemma in which tradition must be broken.

"The Council of Four has lost courage, and so, perhaps, have many of the people of Sennech. We have ways of
knowing that the people of Coar, far more than our own, clamor at their government for any sort of peace.

"Coar's fleets are smashed and the remnants have fled from space.

"Clearly, courage has all but vanished from the Solar System; yet there is one place where courage has not wavered. That place is in the Fleet of Sennech.

"At this moment we are the only strength left in the Solar System. We dominate the System!

"Would we have history record that the Fleet won its fight gloriously, then cravenly shrank back from the very brink of victory?

"We left Sennech fully armed, though our orders were directly opposite. I need not tell you that I have made the decision any man of the Fleet would make.

"This is our final campaign. Within a short time we shall orbit Coar herself and force her surrender. That is all."

There was a moment so quiet that the hum of the circuits grew loud, then the monitors shook with a mighty cheer.

Later, alone, Jezef congratulated him amusedly. "They are certainly with you a hundred percent now, if there was any doubt before. Yet there was one argument you didn't even hint at; the strongest argument of all."

"What was that?"

"Why, you're offering them a chance at life and freedom, where they might be going to imprisonment or execution."

That irritated Tulan. "I'm sure you're not so cynical about Fleet loyalty and tradition as you pretend," he said stiffly. "I wouldn't affront the men by using that kind of an argument."

Jezef grinned more widely. "Did it even occur to you to use it?"

Tulan flushed. "No," he admitted.

* * * * *

Teyr and her moon Luhin, both in quarter-phase from here, moved steadily apart in the viewers.

Group One's screen of light craft probed ahead, jamming enemy radar, and discovering occasional roboscouts which were promptly vaporized. Far behind, Group Two showed as a small luminescence. It would never be visible to Luhin as anything else, and then only when Tulan was ready.

They reversed drives, matched speeds neatly, and went into forced orbit around Luhin. On the flagship's first pass over the beleaguered oval of ground held by Sennech's forces--unsupported and unreinforced since the home planet's defection--Tulan sent a message squirting down. "Tulan commanding. Is Admiral Galu commanding there? Report situation."

The next time around a long reply came up to them. "This is Captain Rhu commanding. Galu killed. Twenty percent personnel losses. Six Lights destroyed; moderate damage to several Mediums and one Heavy. Ground lines under heavy pressure. Ships' crews involved in fighting at perimeter. Food critical, other supplies low. Several thousand wounded. Combat data follows." There was a good assessment of the struggle, with some enemy positions that were known.

The Fleet Force that had escorted nearly one hundred thousand ground troops included five Heavies and other craft in proportion, besides the transports and supply ships. Alone, they'd been pinned down by superior enemy ground forces and by a sizable fleet holed up all around the satellite. With Tulan's support they could be taken off.

Tulan composed orders. "Withdraw ships' crews from lines and prepare to lift. Get wounded aboard transports and prepare to evacuate troops. Set up fire control network to direct our ground support."

The tedious job of shrinking the perimeter, a short stretch at a time, began, harassed by the quickly adapting enemy.

During the first twenty hours the hostile fire was all from ground projectors, the enemy ships not risking detection by joining in. By that time one section of the front had pulled back to where several ships, sheltered in a crater, would have to lift.

Lines of men and equipment converged on the ships and jammed aboard. The actual lift was preceded by a diversion a few miles away, which succeeded in pulling considerable enemy fire. The ships got off in unison, slanting back across friendly territory and drawing only light missiles which the defenses handled easily.

* * * * *

Then, suddenly, a salvo of heavy stuff came crashing in, too unexpected and too well planned to stop. One of the lifting ships, a transport, vanished in a great flash.

Tulan yelled into his communicator. "Plot! Where did that come from?"

"I'm sorting, sir. Here! A roboscout got a straight five-second plot before they downed it!"

"Intelligence!" Tulan snapped. "Get the co-ordinates and bring me photos!"

There were already pictures of the area where the salvo must have originated, and one of them showed a cave-like opening in a crater wall. "That's it!" Tulan jabbed a pencil at it. "You could hide a dozen ships in there. Let's get
a strike organized!

* * * * *

The strike group included four Heavies besides the flagship, with twelve Mediums and twenty Lights. They slanted down in a jerky evasive course while pictures flashed on screens to be compared with the actual terrain.

Ground fire, chemically propelled missiles, erupted ahead of them and the small craft went to work intercepting it. They were down to a hundred miles, then fifty, streaking along the jagged surface so close they seemed to scrape it. This was point-blank range; as the computers raced with the chaos of fire and counter-fire, human senses could only register a few impressions—the bruising jerks, the shudder of concussions, white streaks of rocket-trails, gushers of dirt from the surface, winking flashes of mid-air interception.

Then the Heavies were on target. The flagship jumped as the massive salvo leaped away—not chemical missiles, but huge space torpedoes propelled by Pulsor units like the ships' drives, directing their own flocks of smaller defensive missiles by an intricate network of controls. The small stuff, augmented by fire from the lighter ships, formed momentarily a visible tube down which the big stuff streaked untouched.

The whole crater seemed to burst upward, reaching out angry fingers of shattered rock as they ripped by, rocking and bucking with the blasts. Tulan's viewer swivelled aft to hold the scene. Secondary blasts went off like strings of giant firecrackers. Great black-and-orange fungi-like clouds swirled upward, dissipating fast in the thin atmosphere. Then Tulan spotted what he was looking for: three small ships flashing over the area, to get damage-assessment pictures. There was still a lot of ground-fire from farther out, and it caught one of the three, which wobbled crazily then disappeared in a flash which blanked out the viewscreen.

"Intelligence!" Tulan shouted. "Casualties?"

Intelligence was listening to his earphones and punching buttons. "Two Lights lost, sir. Slight damage to seven more and to one Medium."

"All right. Get a telecopy of those pictures as soon as you can; we certainly hit something. Maybe a Heavy or two." He relaxed, aching, and reflected that he was getting a little mature for actual combat.

The pull-back went on, drawing only the local ground-fire now that the enemy had been taught his lesson. Groups of ships lifted almost constantly. The final position was an oval forty by sixty miles, held almost entirely from the sky. The last evacuees straggled in like weary ants, and when the radio reported no more of them the last fifty ships lifted together and ran the gauntlet with slight losses.

Tulan pulled the Force away for rest and repair. Group Two was idling at extreme radar range, making a convincing blip, and he designed some false messages to be beamed toward it with the expectation of interception. The impression he wanted to give was that Group Two was the Force that had been bombarding Coar, coming in now to join him. Actually, the latter fleet was farther away, hidden in the sun and, he hoped, unsuspected.

* * * * *

Things were going according to plan except for one puzzling item: there was no message from Sennech's small garrison on Teyr. All he could get from the planet was a steady radar scan, which might mean that Sennech's colony had been conquered by Coar's.

He'd been hoping to get certain supplies from Teyr, and now he took a strong detachment in close to the planet to find out what was wrong. The threat finally raised an answer. "This is the Chief of Council. What is it that you want?"

"Chief of Council? What are you talking about? I want the Garrison Commander."

"I suppose you're Admiral Tulan. There's been a change here, Tulan; Teyr is now an independent planet. Your garrison, with Coar's, comprise our defense forces."

Tulan stared at the planet's image. "You're at war with Coar!"

"Not any more, we aren't." There was a chuckle. "Don't sound so shocked, Admiral; we understand you're in mutiny yourself."

Tulan slapped the microphone onto its hangar. He sat, angry and bewildered, until he remembered something, then buzzed Communications. "Get me that connection again. Hello? Listen. I have sixty thousand troops in transports, with almost no food. I intend to land them."

"They're welcome as noncombatants, Admiral. They'll have to land disarmed, in areas we designate, and live off the country. We've already got more refugees than we can handle."

"Refugees from where?"

"Haven't you been in contact with Sennech at all?"

"No."

"Oh." There was a thoughtful pause. "Then you don't know. There's bad radiation in the atmosphere and we're hauling as many away as we can. We can use your ships if you're finished playing soldier."

Tulan broke the connection again and turned, fuming, to Jezef. "We'll blast our way in and take over!"
Jezef raised his eyebrows. "What good would that do?" he asked.

"Why; they--for one thing, we've got to think of those troops! We can't land them unarmed and let them be slaughtered by the savages!"

Jezef grinned. "I doubt if they'll refuse to let them have enough small arms to defend themselves. They can't stay where they are."

"But they're military men, and loyal!"

"Are they? The war's over for them, anyway. Why not let them vote on it?"

Tulan jumped up and strode around the command room, while Jezef and the staff watched him silently.

Gradually, the logic of it forced itself upon him. "All right," he said wearily, "We'll let them vote."

* * * * *

A few hours later he studied the results gloomily. "Well, after all, they're not Fleet. They don't have the tradition."

Jezef smiled, then lingered, embarrassed.

"Well?" Tulan asked.

"Sir," (that hadn't come out, in private, for years) "I'd like to be relieved."

It was a blow, but Tulan found he wasn't really surprised. He stared at his brother-in-law, feeling as if he faced an amputation. "You think I'm wrong about this whole thing, don't you?"

"I'm not going to judge that, but Sennech's in trouble far worse than any question of politics, including your own family."

"But if we turn back now Coar will recover! It's only going to take us a few more hours!"

"How long does it take people to die?"

Tulan looked at the deck for a while. "All right. I'll detach every ship I can spare, and put you in charge. You'll have the transports too, as soon as they're unloaded." He stared after Jezef, wanting to call out to him to be sure to send word about Anatu and the boys, but somehow feeling he didn't have the right.

* * * * *

He took the fighting ships away from Teyr, to where Group Two could join up without being unmasked, then started sunward as if he were crossing to intercept Coar. A few miles in, where they'd be hidden in the sun, he left a few scouts.

As he saw it, the enemy commander on the satellite, noting the armada's course and finding himself apparently clear, would have no choice but to lift his ships and start around the sun by some other path to help his planet.

That other path to Coar could be intercepted, and as soon as Tulan was lost near the sun he went into heavy drive to change direction. He drifted across the sun, waiting for word from his scouts. At about the time he'd expected, they reported ships leaving the satellite.

He looked across the room toward Plot. "Plot! Feed that data to Communications as it comes in, will you?" And to Communications: "Can we beam Group Three from here?"

"Not quite, sir; but I can relay through the scouts."

"All right; but make sure it's not intercepted. I want Group Three under maximum acceleration for Luhin, and I want them to get running reports on the enemy."

"Right, sir."

Tulan was in the position he wanted, not needing to use his own radar, but able to pick up that of Coar's fleet at extreme range, too far to give them a bounce. He'd know their course, speed, and acceleration fairly well, without even being suspected himself.

He held that position until the enemy was close enough to get a bounce, then went into drive on an intercepting course.

One of the basic tenets of space maneuver was this: if two fleets were drawing together, with radar contact, neither (barring interference from factors such as the sun or planets) could escape the other; for if one applied acceleration in any direction the other could simply match it (human endurance being the limitation) and maintain the original relative closing speed.

When the enemy commander discovered Tulan's armada loafing ahead of him, he'd been accelerating for about ten hours and had a velocity of a million miles per hour, while Tulan was going the same direction but at half the speed. The quarry began decelerating immediately, knowing it could get back to Luhin with time enough to land.

Tulan didn't quite match the deceleration, preferring to waste a few hours and lessen the strain on his crews. He let the gap close slowly.

He could tell almost the precise instant when the other jaw of his trap was discovered, for Plot, Communications, and Intelligence all jerked up their heads and looked at him. He grinned at them. What they'd picked up would be an enemy beam from Luhin, recklessly sweeping space to find the Coar fleet and warn it of the
onrushing Group Three.

The enemy commander reacted fast. It was obvious he'd never beat Group Three to Luhin, and he made no futile attempts at dodging, but reversed drives and accelerated toward the nearest enemy, which was Tulan. Tulan was not surprised at that either, for though Coar's fleets had bungled the war miserably, when cornered they'd always fought and died like men.

He matched their acceleration to hold down the relative speeds. The swift passing clash would be brief at best. He formed his forces into an arrangement he'd schemed up long ago but never used: a flat disc of lighter ships out in front, masking a doughnut-shaped mass behind. He maneuvered laterally to keep the doughnut centered on the line of approach.

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Roboscouts appeared and blossomed briefly as they died. The fuzzy patch of light on the screens swelled, then began to resolve into individual points. The first missiles arrived. Intricate patterns of incandescence formed and vanished as fire-control systems locked wits.

A sudden, brilliantly planned salvo came streaking in, saturating the defenses along its path. Ships in Tulan's secondary formation swerved frantically, but one darting, corkscrewing missile homed on a Heavy, and for an instant there were two suns.

Tulan, missing Jezef's smooth help, was caught up in the daze and strain of battle now. He punched buttons and shouted orders as he played the fleet to match the enemy's subtle swerving. Another heavy salvo came in, but the computers had its sources pinpointed now, and it was contained. These first few seconds favored the enemy, who was only fighting the light shield in front of Tulan's formation.

Now the swelling mass of blips streaked apart in the viewers and space lit up with the fire and interception. Two ships met head on; at such velocities it was like a nuclear blast.

Then Coar's ships crashed through the shield and into the center of the doughnut. Ringed, outgunned, outpredicted, they hit such a concentration of missiles that it might as well have been a solid wall. Ships disintegrated as if on a common fuse; the ones that didn't take direct hits needed none, in that debris-filled stretch of hell.

Tulan's flagship rocked in the wave of expanding hot gasses. There was a jolt as some piece of junk hit her; if she hadn't already been under crushing acceleration away from the inferno she'd have been holed.

From a safer distance the path of destruction was a bright slash across space, growing into the distance with its momentum. It was annihilation, too awful for triumph; there was only horror in it. Tulan knew that with this overwhelming tactic he'd written a new text-book for action against an inferior fleet. He hoped it would never be printed. Sweating and weak, he slumped in his straps and was ill.

* * * * *

While brief repairs and re-arming were under way, he sent scouts spiraling out to pick up any radio beams from Sennech or Teyr. There were none. The telescopes showed Sennech's albedo down to a fraction of normal; that, he supposed, would indicate smoke in the atmosphere. He wavered, wondering whether he should detach more ships to send out there. Reason and training told him to stick to the key objective, which was Coar's surrender. He waited only for Group Three to achieve a converging course, then started around the sun again.

They didn't encounter even a roboscout. He crossed the sun, curved into Coar's orbit, matched speeds, and coasted along a million miles ahead of the planet, sending light sorties in to feel out any ambushes. Still there was no sign of fight, so he went in closer where the enemy could get a good look at his strength. Finally he took a small group in boldly over the fourth planet's Capitol and sent a challenge.

The answer was odd. "This is Acting President Kliu. What are your intentions?"

Tulan realized he was holding his breath. He let it out and looked around the silent command room, meeting the intent eyes of his staff. He had an unreal feeling; this couldn't be the climax, the consummation--this simple exchange over the radio. He lifted the microphone slowly. "This is Admiral Tulan, commanding the Fleets of Sennech. I demand your immediate and unconditional surrender."

There was something in the reply that might have been dry amusement: "Oh; by all means; but I hope you're not going to insist upon an elaborate ceremony. Right now we don't give a damn about the war; we're worried about the race."

There was more silence, and Tulan turned, uncertainly, looking at the bare spot where Jezef ought to be standing. He buzzed for Communications. "Connect me with Captain Rhu. Rhu; I'm advancing you in rank and leaving you in charge here. I'm going down to accept the surrender and find out what this man's talking about."

* * * * *

Kliu was gaunt and middle-aged, wearing, to Tulan's surprise, the gray of Coar's First Level of Science. He was neither abject nor hostile, agreeing impatiently to turn over the secret of Coar's weapon and to assist with a token
occupation of the planet. Again Tulan had the unreal, let-down feeling, and judging by Kliu's amused expression, it showed.

Tulan sent couriers to get things started, then turned back to the scientist. "So you have had a change of government. What did you mean, about the race?"

Kliu watched him for a moment. "How much do you know about the weapon?"

"Very little. That it projects matter through hyperspace and materializes it where you want it."

"Not exactly; the materialization is spontaneous. Mass somehow distorts hyperspace, and when the projected matter has penetrated a certain distance into such distortion, it pops back into normal space. The penetration depends mainly upon a sort of internal energy in the missile; you might think of it more as a voltage than as velocity. You've made it very hard for us to get reports, but I understand we successfully placed stuff in Sennech's crust."

"Yes; causing volcanoes. Our scientists speculated that any kind of matter would do it."

"That's right. Actually, we were projecting weighed chunks of rock. When one bit of matter, even a single atom, finds itself materializing where another already is, unnatural elements may be formed, most of them unstable. That's what blew holes in your crust and let the magma out."

Tulan considered the military implications of the weapon for a few moments, then pulled his mind back. "I see; but what about the radiation? It wasn't more than a trace when I left."

Kliu looked away for a while before answering. "When we learned you'd defied your government, our own military got out of hand. They had a couple of days before the sun cut us off completely, and they began throwing stuff as soon as it could be dug and hauled to the projectors. They used high energies to get it past the sun. As we realize now, a lot of it hit the planet deeper than at first, below the crust. Under such pressure a different set of fissionables was formed. Some of them burst out and poisoned the atmosphere, but most of them are still there."

"We've got to get an expedition out there to study things. Will you help?"

There was another of the palpable silences, and when he spoke Tulan's voice sounded unnatural. "I--yes; we'll help. Whatever you want. Is ... Sennech finished?"

Kliu smiled tightly. "Sennech, for sure; and she may take the rest of us with her. Nobody conceived what this might come to. A lot of those deep materializations produced pockets of dense fissionables, and they're converging toward the center under their own weight. When they get to a certain point, we'll have a fine monument to Man's ingenuity. A planet-size nova." He stood up. "I'll start organizing."

* * * * *

Tulan existed someway through the preparations, and when they were in space again the solid familiarity of his ship helped. His staff was carrying on wonderfully; shielding him, he suspected, from considerable hostility. Discipline held up.

A technology that had spanned five orbits and probed beyond was at bay, and the expedition was tremendous. Hardly an art or science was unrepresented. If need be, whole ships could be built in space.

A beam from Teyr as they passed told of refugees by the hundreds of thousands, dumped in the wilderness with a few ships still trickling in. Tulan would have traded everything he could command to hear a word of Jezef or the family, but Teyr wasn't concerned with individuals and he didn't ask.

Sennech was dull gray in the telescopes, showing, as they neared, flecks of fire. They went in fast, using her gravity to help them curve into a forced orbit as they strained to decelerate. Thermocouples gave readings close to the boiling point of water; that, probably, was the temperature of the lower air.

Roboscouts went down first, then, as conditions were ascertained, manned ships. Tulan took the flagship down once. Her coolers labored and her searchlights were swallowed in murk within a few feet. Sounds carried through the hull; the howl of great winds and the thumps of explosions. Once a geyser of glowing lava spattered the ship.

Within hours the picture began to form. The surface was a boiling sea broken only by transient mountain peaks which tumbled down in quakes or were washed away by the incessant hot rain. It would have been hard to find a single trace of the civilization that had flourished scant hours before.

* * * * *

The slower job was learning, by countless readings and painful deduction, what was going on inside the planet. Tulan occupied himself with organizational tasks and clung to what dignity he could. After an eternity Kliu had time for him.

"She'll blow, all right," the scientist said, sinking tiredly into a seat. "Within half a year. Her year."

"Twenty thousand hours," Tulan said automatically. "How about the other planets?"

"Coar has one chance in a hundred, Teyr possibly one in ten."

Tulan had to keep talking. "The outer satellites. We can do a lot in that time."

Kliu shrugged. "A few thousand people, and who knows what will happen to them afterward? It's going to be a long time before the System's inhabitable again, if ever."
"Ships ... people can live a long time in ships."
"Not that long."
"There must be something! The power we've got, and this hyperspace thing."
Kliu shook his head. "I can guess what you're thinking; we've been all over it. There's no way to get to the stars, and no way to move a planet out of its orbit. Don't think we haven't been pounding our skulls, but the figures are hopeless."
Tulan stared at the ulcerous image on the screen, built up by infra-red probing through the opaque atmosphere. "She looks ready to fall apart right now. How much of her could you blast off?"
Kliu smiled wearily and without humor. "We've worked that idea to the bone, too. If you could build a big enough projector, and mount it on an infinitely solid base, you could push something deep enough and accurately enough to throw off stuff at escape velocity, but it's a matter of energy and we can't handle one percent of what we'd need. Even if you could generate it fast enough, your conduits would melt under the current." He got up and walked a few steps, then sat down again. "Ironic, isn't it? All we can do is destroy ourselves."
Tulan's mind couldn't accept it; he was used to thinking that any amount of energy could be handled some way. "There must be something," he repeated, feeling foolish as he said it.
He went over the figures he knew so well; the acceleration and the total energy necessary to drive a ship to the nearest stars. Even a ship's Pulsors, pouring energy out steadily, were pitiful compared to that job. Schoolboys knew the figures; mankind had dreamed for generations ...
He sat up abruptly. "This hyperspace; didn't you tell me there were such things as velocity and momentum in it?"
Kliu's eyes focussed. "Yes; why?"
"And that a projector could be built to put an entire ship into hyperspace?"
Kliu stared at him for a second. "Kinetic energy! Built up gradually!" He jumped to his feet. "Come on! Let's get to the computers!"

* * * * *
Several hundred hours later Tulan lay watching the pinpoint on his viewscreen that represented Sennech. He'd been building up speed for a long time; he ached from the steady double-gravity. The ship, vastly beefed up, was moving at a good fraction of the speed of light. It wouldn't be much longer.
The cargo of carefully chosen matter, shifting into hyperspace at the right instant, would be taken deep into Sennech by the momentum he'd accumulated in normal space. If the calculations were right, the resulting blast would knock a chunk completely out of the planet. Each of the thousands of other ships tied to him by robot controls would take its own bite at the right time and place. Providing the plan worked.
The Solar System would have a few hot moments, and would be full of junk for a long time, but the threatening fissionables inside Sennech would be hurled far apart, to dribble away their potency gradually. Kliu admitted no one could calculate for sure even how much, if any, of Sennech would remain as a planet, but Teyr, at least, with her thick atmosphere, should withstand the rain of debris.
He wondered about his family, and Jezef. Kliu had tried to get word, but the tragically few refugees were scattered.
He smiled, recalling how severely he'd had to order his staff to abandon him. He was proud to remember that much of the fleet would have come along, if he'd let them; but live men were going to be at more of a premium on Teyr than heroic atoms drifting in space. Machines could handle this assault. He himself had not had to touch a single control.
The indicators began to flash, and, sweating with the effort, he hauled himself erect to attention. It was good to be winding up here in his own command room, where he'd lived his moments of triumph. Still, as the red light winked on, he couldn't help thinking how very quiet and lonely it was without Jezef and the staff.
THE END
Ronny was playing by himself, which meant he was two tribes of Indians having a war. "Bang," he muttered, firing an imaginary rifle. He decided that it was a time in history before the white people had sold the Indians any guns, and changed the rifle into a bow. "Wizzthunk," he substituted, mimicking from an Indian film on TV the graphic sound of an arrow striking flesh. "Oof." He folded down onto the grass, moaning, "Uhhhooh ..." and relaxing into defeat and death. "Want some chocolate milk, Ronny?" asked his mother's voice from the kitchen. "No, thanks," he called back, climbing to his feet to be another man. "Wizzthunk, wizzthunk," he added to the flights of arrows as the best archer in the tribe. "Last arrow. Wizzzz," he said, missing one enemy for realism. He addressed another battling brave. "Who has more arrows? They are coming too close. No time--I'll have to use my knife." He drew the imaginary knife, ducking an arrow as it shot close. * * * * *

Then he was the tribal chief standing somewhere else, and he saw that the warriors left alive were outnumbered. "We must retreat. We cannot leave our tribe without warriors to protect the women."

Ronny decided that the chief was heroically wounded, his voice wavering from weakness. He had been propping himself against a tree to appear unharmed, but now he moved so that his braves could see he was pinned to the trunk by an arrow and could not walk. They cried out.

He said, "Leave me and escape. But remember...." No words came, just the feeling of being what he was, a dying old eagle, a chief of warriors, speaking to young warriors who would need advice of seasoned humor and moderation to carry them through their young battles. He had to finish the sentence, tell them something wise.

Ronny tried harder, pulling the feeling around him like a cloak of resignation and pride, leaning indifferently against the tree where the arrow had pinned him, hearing dimly in anticipation the sound of his aged voice conquering weakness to speak wisely of what they needed to be told. They had many battles ahead of them, and the battles would be against odds, with so many dead already.

They must watch and wait, be flexible and tenacious, determined and persistent--but not too rash, subtle and indirect--not cowardly, and above all be patient with the triumph of the enemy and not maddened into suicidal direct attack.

His stomach hurt with the arrow wound, and his braves waited to hear his words. He had to sum a part of his life's experience in words. Ronny tried harder to build the scene realistically. Then suddenly it was real. He was the man.

He was an old man, guide and adviser in an oblique battle against great odds. He was dying of something and his stomach hurt with a knotted ache, like hunger, and he was thirsty. He had refused to let the young men make the sacrifice of trying to rescue him. He was hostage in the jail and dying, because he would not surrender to the enemy nor cease to fight them. He smiled and said, "Remember to live like other men, but--remember to remember."

And then he was saying things that could not be put into words, complex feelings that were ways of taking bad situations that made them easier to smile at, and then sentences that were not sentences, but single alphabet letters pushing each other with signs, with a feeling of being connected like two halves of a swing, one side moving up when the other moved down, or like swings or like cogs and pendulums inside a clock, only without the cogs, just with the push.

It wasn't adding or multiplication, and it used letters instead of numbers, but Ronny knew it was some kind of arithmetic.

And he wasn't Ronny.

He was an old man, teaching young men, and the old man did not know about Ronny. He thought sadly how little he would be able to convey to the young men, and he remembered more, trying to sum long memories and much living into a few direct thoughts. And Ronny was the old man and himself, both at once.

* * * * *

It was too intense. Part of Ronny wanted to escape and be alone, and that part withdrew and wanted to play something. Ronny sat in the grass and played with his toes like a much younger child.
Part of Ronny that was Doctor Revert Purcell sat on the edge of a prison cot, concentrating on secret unpublished equations of biogenic stability which he wanted to pass on to the responsible hands of young researchers in the concealed-research chain. He was using the way of thinking which they had told him was the telepathic sending of ideas to anyone ready to receive. It was odd that he himself could never tell when he was sending. Probably a matter of age. They had started trying to teach him when he was already too old for anything so different.

The water tap, four feet away, was dripping steadily, and it was hard for Purcell to concentrate, so intense was his thirst. He wondered if he could gather strength to walk that far. He was sitting up and that was good, but the struggle to raise himself that far had left him dizzy and trembling. If he tried to stand, the effort would surely interrupt his transmitting of equations and all the data he had not sent yet.

Would the man with the keys who looked in the door twice a day care whether Purcell died with dignity? He was the only audience, and his expression never changed when Purcell asked him to point out to the authorities that he was not being given anything to eat. It was funny to Purcell to find that he wanted the respect of any audience to his dying, even of a man without response who treated him as if he were already a corpse.

Perhaps the man would respond if Purcell said, "I have changed my mind. I will tell."

But if he said that, he would lose his own respect.

At the biochemists' and bio-physicists' convention, the reporter had asked him if any of his researches could be applied to warfare.

He had answered with no feeling of danger, knowing that what he did was common practice among research men, sure that it was an unchallengeable right.

"Some of them can, but those I keep to myself."

The reporter remained dead-pan. "For instance?"

"Well, I have to choose something that won't reveal how it's done now, but--ah--for example, a way of cheaply mass-producing specific antitoxins against any germ. It sounds harmless if you don't think about it, but actually it would make germ warfare the most deadly and inexpensive weapon yet developed, for it would make it possible to prevent the backspread of contagion into a country's own troops, without much expense. There would be hell to pay if anyone ever let that out." Then he had added, trying to get the reporter to understand enough to change his cynical unimpressed expression, "You understand, germs are cheap--there would be a new plague to spread every time some pipsqueak biologist mutated a new germ. It isn't even expensive or difficult, as atom bombs are."

The headline was: "Scientist Refuses to Give Secret of Weapon to Government."

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Government men came and asked him if this was correct, and on having it confirmed pointed out that he had an obligation. The research foundations where he had worked were subsidized by government money. He had been deferred from military service during his early years of study and work so he could become a scientist, instead of having to fight or die on the battlefield.

"This might be so," he had said. "I am making an attempt to serve mankind by doing as much good and as little damage as possible. If you don't mind, I'd rather use my own judgment about what constitutes service."

The statement seemed too blunt the minute he had said it, and he recognized that it had implications that his judgment was superior to that of the government. It probably was the most antagonizing thing that could have been said, but he could see no other possible statement, for it represented precisely what he thought.

There were bigger headlines about that interview, and when he stepped outside his building for lunch the next day, several small gangs of patriots arrived with the proclaimed purpose of persuading him to tell. They fought each other for the privilege.

The police had rescued him after he had lost several front teeth and had one eye badly gouged. They then left him to the care of the prison doctor in protective custody. Two days later, after having been questioned several times on his attitude toward revealing the parts of his research he had kept secret, he was transferred to a place that looked like a military jail, and left alone. He was not told what his status was.

When someone came and asked him questions about his attitude, Purcell felt quite sure that what they were doing to him was illegal. He stated that he was going on a hunger strike until he was allowed to have visitors and see a lawyer.

The next time the dinner hour arrived, they gave him nothing to eat. There had been no food in the cell since, and that was probably two weeks ago. He was not sure just how long, for during part of the second week his memory had become garbled. He dimly remembered something that might have been delirium, which could have lasted more than one day.

Perhaps the military who wanted the antitoxins for germ warfare were waiting quietly for him either to talk or die.
Ronny got up from the grass and went into the kitchen, stumbling in his walk like a beginning toddler. "Choc-mil?" he said to his mother. She poured him some and teased gently, "What's the matter, Ronny--back to baby-talk?"

He looked at her with big solemn eyes and drank slowly, not answering.

In the cell somewhere distant, Dr. Purcell, famous biochemist, began waveringly trying to rise to his feet, unable to remember hunger as anything separate from him that could ever be ended, but weakly wanting a glass of water. Ronny could not feed him with the chocolate milk. Even though this was another himself, the body that was drinking was not the one that was thirsty.

He wandered out into the backyard again, carrying the glass. "Bang," he said deceptively, pointing with his hand in case his mother was looking. "Bang." Everything had to seem usual; he was sure of that. This was too big a thing, and too private, to tell a grownup.

On the way back from the sink, Dr. Purcell slipped and fell and hit his head against the edge of the iron cot. Ronny felt the edge gashing through skin and into bone, and then a relaxing blankness inside his head, like falling asleep suddenly when they are telling you a fairy story while you want to stay awake to find out what happened next.

"Bang," said Ronny vaguely, pointing at a tree. "Bang." He was ashamed because he had fallen down in the cell and hurt his head and become just Ronny again before he had finished sending out his equations. He tried to make believe he was alive again, but it didn't work.

You could never make-believe anything to a real good finish. They never ended neatly--there was always something unfinished, and something that would go right on after the end.

It would have been nice if the jailers had come in and he had been able to say something noble to them before dying, to show that he was brave.

"Bang," he said randomly, pointing his finger at his head, and then jerked his hand away as if it had burned him. He had become the wrong person that time. The feel of a bullet jolting the side of his head was startling and unpleasant, even if not real, and the flash of someone's vindictive anger and self-pity while pulling a trigger.... My wife will be sorry she ever.... He didn't like that kind of make-believe. It felt unsafe to do it without making up a story first.

Ronny decided to be Indian braves again. They weren't very real, and when they were, they had simple straightforward emotions about courage and skill and pride and friendship that he would like.

A man was leaning his arms on the fence, watching him. "Nice day." What's the matter, kid, are you an esper? "Hul-lo." Ronny stood on one foot and watched him. Just making believe. I only want to play. They make it too serious, having all these troubles.

"Good countryside." The man gestured at the back yards, all opened in together with tangled bushes here and there to crouch behind, when other kids were there to play hide and seek, and with trees to climb. It can be the Universe if you pick and choose who to be, and don't let wrong choices make you shut off from it. You can make yourself learn from this if you are strong enough. Who have you been?

Ronny stood on the other foot and scratched the back of his leg with his toes. He didn't want to remember. He always forgot right away, but this grownup was confident and young and strong-looking, and meant something when he talked, not like most grownups.

"I was playing Indian." I was an old chief, captured by enemies, trying to pass on to other warriors the wisdom of my life before I died. He made believe he was the chief a little to show the young man what he was talking about.

"Purcell!" The man drew in his breath between his teeth, and his face paled. He pulled back from reaching Ronny with his feelings, like holding his breath in. "Good game." You can learn from him. Don't leave him shut off, I beg you. You can let him influence you without being pulled off your own course. He was a good man. You were honored, and I envy the man you will be if you contacted him on resonant similarities.

The thoughts were open to him. Do you want to be the old chief again, Ronny? Be him often, so you can learn to know what he knew? (And feel as he felt. It would be a stiff dose for a kid.) It will be rich and exciting, full of...
memories and skills. (But hard to chew. I'm doing this for Purcell, Ronny, not for you. You have to make up your own mind.)

"That was a good game. Are you going to play it any more?"

* * * * *

His mother would not like it. She would feel the difference in him, as much as if he had read one of the books she kept away from him, books that were supposed to be for adults only. The difference would hurt her. He was being bad, like eating between meals. But to know what grownups knew....

He tightened his fists and looked down at the grass. "I'll play it some more."

The young man smiled, still pale and holding half his feelings back behind a dam. Then mesh with me a moment. Let me in.

He was in with the thought, feeling Ronny's confused consent, reassuring him by not thinking or looking around inside while sending out a single call, Purcell, Doc, that found the combination key to Ronny's guarded yesterdays and last nights and ten minutes ago. Ronny, I'll set that door, Purcell's memories, open for you. You can't close it, but feel like this about it--and he planted in a strong set, questioning, cool, open, a feeling of absorbing without words ... it will give information when you need it, like a dictionary.

The grownup straightened away from the fence, preparing to walk off. Behind a dam pressed grief and anger for the death of the man he called Purcell.

"And any time you want to be the old chief, at any age he lived, just make believe you are him."

Grief and anger pressed more strongly against the dam, and the man turned and left rapidly, letting his thoughts flicker and scatter through private memories that Ronny did not share, that no one shared, breaking thought contact with everyone so that the man could be alone in his own mind to have his feelings in private.

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Ronny picked up the empty glass that had held his chocolate milk from the back steps where he had left it and went inside. As he stepped into the kitchen, he knew what another kitchen had looked like for a five-year-old child who had been Purcell ninety years ago. There had been an iron sink, and a brown-and-green-spotted faucet, and the glass had been heavier and transparent, like real glass.

Ronny reached up and put the colored plastic tumbler down.

"That was a nice young man, dear. What did he say to you?"

Ronny looked up at his mamma, comparing her with the remembered mamma of fifty years ago. He loved the other one, too.

"He tol' me he's glad I play Indian."

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### Contents

**THE DEADLY DAUGHTERS**

By Winston K. Marks

*These gorgeous fanatics were equally at home with men, murder, or matrimony, and they used all three with amazing success.*

Dr. Hubert Long, 40, bachelor and assistant professor of political science at Mentioch University, thrust his rugged, unlovely face forward, sticking out his neck literally and figuratively.

"The Humanist Party," he shouted at the 800 odd students in the lecture hall, "is not a political party at all. It's an oligarchy, so firmly established in Washington that our electoral form of government is an empty ritual, a ridiculous myth. Our elections are rigged to perpetuate a select group of feminists in absolute power."

The mixed group of seniors stirred in their seats with wide eyes, and many began taking notes.

"This may cost me my position at the university," he said grimly, "but the time has come for all responsible citizens to face the fact that the Government of the United States of America has degenerated into little better than an absolute dictatorship!"

This time a rustle of whispering grew to restless buzzing. A young man in a bowtie leaped to his feet breaking the no-questions rule in Long's over-size classes. "May the Mentioch Bugle quote you, Dr. Long?"

"You may headline those views, and I hope you do," Long declared belligerently, adding extra emphasis.

* * * * *

"Exactly what do you imply when you call the Humanist Party a group of feminists?" the young man asked,
encouraged.

Long's gaze swept out, noting the mild amusement on the faces of the men students, the growing annoyance in the women. He fixed the reporter for the campus paper with a level stare. "I suppose you feel that because only 30 percent of our legislatures are women, that men still dominate Congress?"

"I think that is the popular conception," the reporter said in a patronizing tone.

"Then think again, young man. Analyze the composition of the Senate and House, and break down the key committee appointments by sexes. You will find three-fourths of these posts held by women, and the balance are held by men whose wives are members of the top-level Humanist Party movement. I say to you that our whole nation is dominated by a handful of female fanatics to whom intellectual integrity is unknown."

"What are your indictments? Please enumerate--"

"I will, I will," Long shouted, ignoring the microphone before him. "Without consideration of our national prestige the Humanist Party has emasculated our influence as a world power with its pacifistic actions. On the domestic front, the Party has initiated a program of so-called Internal Security, a cradle-to-the-grave pampering that amounts to the most vicious State-Socialism the world has seen since the fall of Soviet Russia. We are fast becoming slaves to the soft, gutless bureaucracy in Washington that feeds us, wipes our noses, encourages excessive breeding and enforces its fantastic policies by use of goon squads!"

"Goon squads?" The young reporter lost his smile. "You had better clarify that, Dr. Long. I wouldn't want to join you in a libel action."

"Keep quoting me," Long snarled. "I said goon squads, and I meant just that. Once I belonged to a scholarly fraternity of political scientists who were critical of our government. Of some eighteen members, I am the only one left in public life. The rest have all disappeared, and I have no doubt that my previous silence on these matters is all that has saved me. But the time for discretion is past. If we are to save our independence and democratic freedoms the time for action is now! I say to you--"

* * * * *

It made more than the headlines of the college campus at Mentioch. The news-wire services picked it up, and Dr. Long's radical views made pages two and three all over the nation.

Emily Bogarth, head of Internal Security, raged at her assistant, bald-headed Terman Donlup. "Must I read about these things in the papers to keep up on subversive activity?"

"But the man's record shows complete stability," Donlup defended. "He simply blew up without any warning at all. The Dean of Women at Mentioch tells me that Dr. Long has never had a word of criticism from his department head. I suppose we had better remove him from his position at once, eh?"

Madame Secretary Bogarth shook her head. "That's not enough. This calls for liquidation. I want a special squad on this one." She began writing names on a sheet of paper, names of some of the most effective unscrupulous yet faithful operators in the party's top echelon.

She handed it to Donlup. "This man is dangerous. He could force us into open control of the press and higher education. Get these people here not later than tomorrow. We can't waste time."

"Yes, Madame Secretary," Donlup saluted with a full bow and went to work.

* * * * *

The following afternoon Emily Bogarth faced the squad with its brilliant, green-eyed leader. She told them their mission and then dismissed all but one. "I'm sorry to hand this one to you. I know what a promising career you had before you. But this man is deadly to our purpose. Believe me, I am not wasting your special aptitudes."

"If it's for the good of the Party--"

"Dr. Hubert Long is a lighted fuse," Emily Bogarth said, her cold eyes hard on her operator, "that could blow the Humanist movement sky-high. I want you to snuff out that fuse." She squeezed a forefinger against her spatulate thumb.

The operator nodded and the green eyes flashed with the same fanatic spark that electrified American politics at the turn of the 21st century and launched the Humanist Party into its 30-year tenure of power.

* * * * *

At first only a shocked, embarrassed silence greeted Dr. Long on the campus of Mentioch University, but as the press notices of his utterances grew in volume so did his prestige.

He began to have a number of local visitors who evinced sharp interest in his views. At the end of the first week he was holding forth each evening to a sizable audience in his tiny bungalow on the edge of faculty row.

By nature a careful, practical man, Hubert Long now carried a small pistol in his coat pocket, but being also a fearless, independent individual, he admitted all callers and exposed himself daily to the public. It wasn't entirely personal bravado, however. He knew from his years of intense, discreet research that the goon squads rarely made their attacks in the public eye. When they liquidated him he fervently hoped they would make this mistake and
prove his point concerning their operations.

Although he didn't seek martyrdom, Dr. Long was prepared for it, as he explained to the informal seminar that had accumulated at his home this Sunday afternoon. It was now late evening and the endless questions were beginning to grow wearying.

"How do you know," asked a skeptical businessman, "that I am not an assassin who will ambush you on the way to the bathroom tonight?"

There were several ladies present, and bachelor Long blushed with annoyance. "You might very well be," he retorted. "But probably I have some measure of temporary protection from the publicity I have received. My death, if it occurs, will doubtless appear to be from natural causes, or perhaps from a most ordinary but unfortunate accident."

He arose. "It's rather late and I have an early class. Will you excuse me? Thanks for coming, everyone of you." He nodded, trying to smile, but the chill thought from the businessman's remark persisted. Very possible it was that one or more members of a goon squad was among the twenty-some people now beginning to pick themselves off his worn carpet, footstool, coffee table and the meager furniture he could afford on his salary.

With a small start he realized that a youngish woman, in her early thirties, he guessed, was stalling as though she intended to remain behind. Sure enough, she closed the door behind the others and turned a very lovely face to him. "I think you are magnificent, Dr. Long," she said impulsively. "I hope you will spare me just a few minutes alone?"

Long slipped his right hand into his coat pocket casually. On her feet the woman displayed more than a beautiful face. Her figure was alarmingly feminine and rather aggressively displayed, feet akimbo, hips forward, shoulders back. Her hair was nearly platinum, but so expensively dressed it was impossible to determine whether it was artificially so.

She caught his hesitation. "Perhaps you would feel better out on the porch," she offered, smiling with such relaxed understanding that Long felt a little boorish.

"No. Sit down, please, I didn't catch your name earlier."

"Julie Stone," she introduced herself and held out a long, bare arm. Her hand squeezed his fingers warmly, more like a man's grip. "My brother is Senator Stone, and he asked me to stop by and meet you. Secretly he agrees with much of what you have said, but of course he is reluctant to expose himself until something of a formal movement is under way."

Long relaxed a little. This was good news, about the first he had had to date. Political figures were remaining eloquently silent in the press, and this was the first overture he had enjoyed from anyone more influential than the reporters.

She went on, "Specifically, my brother would like to know which of the other two political parties you favor, in the event you make an appeal through such channels."

"Either party," Long asserted with some emphasis. "In fact I would like to see a coalition of the Democratic and Republican Parties to overthrow this unholy Humanist gang."

Her forehead wrinkled. "Precisely Tom's idea. He's not at all certain it can be done, but he thinks that the press reaction you have had indicates there is a possibility if it is played right."

"Yes, the so-called free press," he said. "Some people have thrown that up to me. If the Humanists were dictators, they say, we wouldn't have this free press that has given my remarks currency. I read it differently. The Humanists have sold the press a bill of goods, and so they control the papers in the most effective way of all. You'll notice that they have printed my speeches strictly as news, you might say as oddities in the news. Editorial comment has been extremely noncommittal."

"I hope you are right," Long said. He made a pot of coffee, and they discussed the matter at some length. He liked this woman's direct, open approach, but she startled him as she was leaving.

"I have much to tell my brother," she said. "For my own curiosity, though, are you certain that some personal distrust or dislike for women hasn't influenced your attack against the government?"

It jarred him like an uppercut. Her detached manner had almost made him forget she was a woman herself. Now this.

"Why--why do you ask?"

She shrugged. "It was a natural thought. There aren't many confirmed bachelors these days."

"Oh, that!" He smiled. "You're quite right, there aren't many unattached men over twenty-one any more, what with the barrage of government propaganda and their special tax deduction incentives. I assure you that it's nothing personal, however. My tastes are simply too rich."

"Your tastes?" It was her turn to arch an eyebrow.
"That's right. A lovely woman is a work of art, but like any other masterpiece, she is a luxury I can't afford. Anyway, this mug of mine rather put me out of the running in the only leagues I've wanted to play in. Incidentally, you introduced yourself as Miss Julie Stone, didn't you?"

"No, but it happens to be correct."

"What's your excuse?"

"For being single? I'm a career girl. I have my own modeling agency. Too busy for one thing. And I guess a woman gets bored looking at beautiful men in my business. Not a brain in a barnful. Just beautiful brawn and wavy hair. Ugh! Animals! Everyone of them."

"Young woman, that's sedition. Don't you believe the government propaganda?"

"If I did do you think I'd be here? No. Dr. Long, I find your arguments quite valid. America is in the hands of the feminists, all right, and it's the fault of several generations of mama's boys. I just can't get--"

* * * * *

She broke off as a heavy truck rolled by out front, back-firing heavily. They were both silhouetted in the open door. She glanced out, and suddenly she threw herself upon him, pulling him to the floor. He caught her in his arms as they cascaded into a tangle of limbs and nylon.

The racket faded off down the street, but Dr. Long's mind was not on the noise. The touch of this beautiful woman's flesh under his hands dominated his whole being. How different, how soft, incredibly soft!

Now she was clinging to him, trembling slightly and breathing deeply. Even at this range her pale hair looked natural. "Are you all right?" she asked at last.

"Of course," he said sitting up reluctantly. "It was only a truck back-firing."

"Look!" She pointed behind him at the wall opposite the door. A wavery line of small, deep holes cut across about heart-high. "I saw the gun-barrel stick out as the truck came up," she explained, untangling herself. "It appears your temporary immunity is over. They're getting active."

Long stared half-unbelieving at the mean, business-like little holes. With the reactions of a trained semanticist he relaxed instead of tensing up with fear. He had made his decision days ago, and he knew full well the risks he incurred.

"Thanks for nothing!" he said coldly.

Julie Stone looked up from straightening her dress and studied his lined face. "So you really were expecting an attack?" She shook her head in disgust. "I finally meet a man with some semblance of guts, and the only way he can think of to win his point is to let a goon squad spill them in the headlines!"

She threw herself into an armchair and crossed her knees. Long stood in the middle of the floor staring down at the woman he had held in his arms minutes ago, and his temples began throbbing. "What--what else is there to do?" he asked hoarsely. "This was my best chance to draw attention to the reality of our police state. I have much more to die for than to live for. This has been my life's work--gathering the facts and contriving to present them dramatically enough to attract national attention. My only fear was that they wouldn't come after me, and I might be written off as a crackpot."

"I regret," she intoned, "that I have but one life to give to my country!" Then her lip curled. "Very well, brainy, if that's the best you can think up. Let's make it better yet. How about this for a headline: Dr. Long and Lovely Model Murdered by Federal Hoods!"

"Are you insane?"

She shook her head. "I'm dead serious. I'm sticking right in the line of fire until you figure out a way to stay alive at a profit."

He argued, pleaded and even lost his temper, pulling her to her feet and trying to force her out the door. He didn't make it. Somehow his arms slipped too far around her, and she clamped herself to him in a defiant embrace. The soft warmth of her body, her sweet breath in his nostrils, the faint essence of her perfume enveloped him in a befuddling weakness.

Live at a profit? How could a man want to die with Julie Stone in his arms?

He knew it was supremely idiotic, but the thought of her fabulous form crumpled and riddled with bullets slashed at the tendons of his resolve, and he clutched her lips to his with the hunger of the condemned man he was.

"Julie, Julie! Why did you have to--"

"One bullet, a single bullet will do it now." Her lips peeled back from her white teeth. "Let's stay this way, darling. That's the way you want it."

Her low, black sedan nibbled at the 100-mile-per-hour limit on the Freeway as they crossed the state line. In the back seat, reclining out of sight, his head pillowed on his brief case full of his documented case against the Humanist Party, was a very thoughtful Dr. Hubert Long, recently of Mentioch University.

He had driven until dawn while Julie Stone slept, and now, after a brief nap, he was waking to some of the
realities of the morning.
This flight was utterly absurd. When the federal people discovered he was not dead they would come after him
again and again. All he had done was involve this lovely woman. Long since he had controlled fear for his own life,
but now he knew the exquisite torment of fearing for the woman he loved.
The emotion was genuine and no less raging for its swift eruption in the space of a single evening. Dr. Hubert
Long was hopelessly and deeply in love with Julie Stone.
"Quit worrying," she called back to him. "They couldn't have spotted my car. I parked it a block from your
house, remember?"
"I hope you have a plan," Long muttered. "I certainly don't. Where are we heading?"
"Florida. To my brother's winter place. You know, I just had a thought. Tom and I are both on the board of
regents of Toppinhout College down there, and there'll be an opening next quarter in the faculty. A professorship, in
fact."
Long grunted. "No dice. They'll have every political scientist in the country under scrutiny for years."
"This is the chair of anthropology," she said. "We can change your name, and after this first excitement of your
disappearance dies down--"
"But I don't want it to die down!" he objected.
"I thought we settled that. You've got to stay alive to talk to important people. Tom and I will round them up
secretly, and you can present your case to them. My brother is the senior Senator, you know, and he's been itching to
bolt the Humanist Party for the last two terms."
"What can I accomplish in secret conferences? The people are the ones who must be aroused."
"I know, I know, from a soapbox in Times Square, I suppose. Darling, you can't accomplish this alone. They've
proved they are willing to take the chance of killing you, so they must be stronger than you think. Your facts must
come to the attention of the right people. Over a period of time we can organize a truly effective underground."
"Toppinhout is a girls' college."
"So?"
"I've never taught anthropology before."
"You've never been married before, either," she pointed out, "but I predict you'll be a success at both."
"Married?" Long popped his head up.
* * * * *
She smiled at him in the rear-view mirror. "Get your head down before you get it blown off. Yes, I said
married. I'm not trusting that pug-ugly, beautiful mug of yours out of my sight from now on. And I'm afraid Tom
will shoot you himself if you don't make it conventional. Tom's old-fashioned."
"But--I couldn't support you on--"
"A full professor's salary? Don't be foolish. Besides, I'm retiring from my agency. Selling out. That'll set us up
housekeeping."
That such a prosaic term as "set us up housekeeping" should send molten lava racing through his veins, did not
seem strange to Dr. Hubert Long. How could a man successfully keep his mind on dying when at last a work of art
like Julie seemed within his reach? He knew that his plans were irrevocably changed.
* * * * *
Emily Bogarth turned to the phone speaker as her assistant made the circuit and signalled to her.
"On the Hubert Long mission--" the speaker said. "Mission accomplished from this end. I trust you have a
likely story for the press?"
"Never mind that. Did it come off as planned?"
"Precisely. Your marksmen were quite effective."
Emily Bogarth sighed. "Sorry to sacrifice you, honey, but the other way is just too messy."
"Don't mention it. This chap has a very interesting mind. He's a challenge--in more ways than one. By the way,
get word to Senator Stone, will you? Have him fly down to his winter home at once. He'll be needed. Some Party
members, too."
"Of course. That's all set up. Good luck!"
"Thanks, but you can put your mind at rest. Dr. Hubert Long is positively liquidated."
* * * * *
Julie stepped from the phone booth and paid the service attendant for the gasoline. He looked at her as he
dropped the change into her hand and wondered who the lucky chap in the back seat might be. A man would sell his
soul for the right kind of a look from those green eyes.
THE END
CRIMINAL NEGLIGENCE
By J. Francis McComas

Somebody was going to have to be left behind ... and who it would be was perfectly obvious....

Warden Halloran smiled slightly. "You expect to have criminals on Mars, then?" he asked. "Is that why you want me?"

"Of course we don't, sir!" snapped the lieutenant general. His name was Knox. "We need men of your administrative ability--"

"Pardon me, general," Lansing interposed smoothly, "I rather think we'd better give the warden a ... a more detailed picture, shall we say? We have been rather abrupt, you know."

"I'd be grateful if you would," Halloran said.

He watched the lanky civilian as Lansing puffed jerkily on his cigar. A long man, with a shock of black hair tumbling over a high, narrow forehead, Lansing had introduced himself as chairman of the project's coordinating committee ... whatever that was.

"Go ahead," grunted Knox. "But make it fast, doctor."

Lansing smiled at the warden, carefully placed his cigar in the ash tray before him and said, "We've been working on the ships night and day. Both the dust itself and its secondary effects are getting closer to us all the time. We've been so intent on the job--it's really been a race against time!--that only yesterday one of my young men remembered the Mountain State Penitentiary was well within our sphere of control."

"The country--what's left of it--has been split up into regions," the general said. "So many ships to each region."

"So," Lansing went on, "learning about you meant there was another batch of passengers to round up. And when I was told the warden was yourself--I know something of your career, Mr. Halloran--I was delighted. Frankly," he grinned at Knox, "we're long on military and scientific brass and short on people who can manage other people."

"I see." Halloran pressed a buzzer on his desk. "I think some of my associates ought to be in on this discussion.""Discussion?" barked Knox. "Is there anything to discuss? We simply want you out of here in an hour--"

"Please, general!" the warden said quietly.

* * * * *

If the gray-clad man who entered the office at that moment heard the general's outburst, he gave no sign. He stood stiffly in front of the warden's big desk, a little to one side of the two visitors, and said, "Hello, Joe. Know where the captain is?"

"First afternoon inspection, sir." He cocked an eye at the clock on the wall behind Halloran. "Ought to be in the laundry about now."

The warden scribbled a few words on a small square of paper. "Ask him to come here at once, please. On your way, please stop in at the hospital and ask Dr. Slade to come along, too." He pushed the paper across the desk to the inmate. "There's your pass."

"Yes sir. Anything else, warden?" He stood, a small, square figure in neat gray shirt and pants, seemingly oblivious to the ill-concealed stares of the two visitors.

Halloran thought a moment, then said, "Yes ... I'd like to see Father Nelson and Rabbi Goldsmid, too."

"Uh, Father Nelson's up on the Row, sir. With Bert Doyle."

"Then we'll not bother him, of course. Just the others."

"Yes, sir. On the double."

Lansing slouched around in his chair and openly watched Joe Mario walk out. Then he turned back to Halloran and said, "That chap a ... a trusty, warden?"

"To a degree. Although we no longer use the term. We classify the inmates according to the amount of responsibility they can handle."

"I see. Ah--" he laughed embarrassedly, "this is the first time I've been in a prison. Mind telling me what his crime was?"

Halloran smiled gently. "We try to remember the man, Dr. Lansing, and not his crime." Then he relented. "Joe
Mario was just a small-time crook who got mixed up in a bad murder."

Lansing whistled.
"Aren't we wasting time?" growled the general. "Seems to me, warden, you could be ordering your people to
pack up without any conference. You're in charge here, aren't you?"

Halloran raised his eyebrows. "In charge? Why, yes ... in the sense that I shape the final decisions. But all of
my assistants contribute to such decisions. Further, we have an inmate's council that voices its opinion on certain of
our problems here. And we--my associates and I--listen to them. Always."

Knox scowled and angrily shifted his big body. Lansing picked up his cigar, relit it, using the action to
unobtrusively study the warden. Hardly a presence to cow hardened criminals, Lansing thought. Halloran was just
below middle height, with gray hair getting a bit thin, eyes that twinkled warmly behind rimless glasses. Yet
Lansing had read somewhere that a critic of Halloran's policies had said the penologist's thinking was far ahead of
his time--too far, the critic had added.

* * * * *

As Joe Mario closed the warden's door behind him, two inmates slowed their typing but did not look up as he
neared their desks. A guard left his post at the outer door and walked toward Mario. The two of them stopped beside
the desks.
"What's the word, Joe?" the guard asked.
Mario held out his pass.
"Gotta round up the captain, Doc Slade and the Jew preacher," he said.
"All right. Get going."
"What do those guys want?" asked a typist as he pulled the paper from his machine.
Mario looked quickly at the guard and as quickly away from him.
"Dunno," he shrugged.
"Somethin' about the war, I bet," grunted the typist.
"War's over, dope," said the other. "Nothin' behind the curtain now but a nice assortment of bomb craters. All
sizes."
"Go on, Joe," ordered the guard. "You heard something. Give."
"Well ... I heard that fat general say something about wanting the warden outa here in an hour."
The typewriters stopped their clacking for a bare instant, then started up again, more slowly. The guard
frowned, then said, "On your way, Joe." He hesitated, then, "No use to tell you to button your lip, I guess."
"I'm not causing any trouble," Mario said, as the guard opened the door and stood aside for him to pass into the
corridor.

O.K.'d for entrance into the hospital wing, Joe Mario stood outside the railing that cut Dr. Slade's reception area
off from the corridor that led to the wards. An inmate orderly sat behind the railing, writing a prescription for a
slight, intelligent-looking man.

Mario heard the orderly say, "All right, Vukich, get that filled at the dispensary. Take one after each meal and
come back to see us when the bottle's empty. Unless the pain gets worse, of course. But I don't think it will."
"Thanks, doc," the patient drawled.
Both men looked up then and saw Mario.
"Hi, Joe," the orderly smiled. "What's wrong with you? You don't look sick!"
"Nothin' wrong with me that a day outside couldn't cure."
"Or a night," laughed Vukich.

Mario ran a hand over his sleek, black hair. "Better a night, sure," he grinned back. Then he sobered and said to
the orderly, "Warden wants to see the doc. Right away."
"Mr. Halloran sick?"
"Naw ... it's business. Urgent business."
"Real urgent, Joe? The doc's doing a pretty serious exam right now."
Mario paused, then said, "You guys might as well know it. There's a general and a civilian in the
warden's office. They're talkin' about something outside. Warden wants the doc in on it."

Sudden tension flowed out between the three men. Down the hall, a patient screamed suddenly in the psycho
ward. The three of them jerked, then grinned feebly at each other.

Vukich said slowly, "Well, you don't start playing catch with atom bombs without dropping a few. Wonder
what it's like ... out there?"
"We haven't heard that it's any different," the orderly's voice lacked conviction.
"Don't be silly," Vukich said flatly. "Ever since they moved the dames from Tehama into C block we've known
something happened."
"Get the doc," Mario said. "I've got to be on my way."
"Me, too." Vukich's thin, clever face looked thoughtful.
The others stared blankly at him and said nothing.

* * * * *

As Alfred Court, captain of the prison, strode down the flower-bordered path that led from the shops unit past A block to the administration building, a side door in A block clanged open and a sergeant came out. The sergeant turned without seeing his superior and walked hurriedly toward the administration wing.

"Hey, sarge!" Court called. "What's the hurry?"
The sergeant whirled, recognized the captain and quickly saluted.
"Glad to see you, sir," he said. "Just the man I was looking for!"
"Good enough. What's on your mind? Better tell me as we go for the warden's in a hurry to see me."
The two men walked abreast, both big, although Court lacked any trace of the sergeant's paunch. As they walked and talked, their eyes darted continually about, unconsciously checking the appearance of the buildings, the position of the guard in the gun tower, the attitude of a very old inmate who was meticulously weeding a flower bed.
"Captain, you going to let the men out for their yard time?"
Court's pace slowed. "Why not?"
"No real reason ... now. But there's trouble in the air, sir. I can smell it. The whole place is buzzing ... with something."
"With what?"
"I can't put my finger on it. But all the men know there's some pretty big shots--at least one general, they say--in the warden's office, right now. There's a hot rumor that there's trouble outside--some sort of disaster."
Court laughed shortly. "That Mario! He's going to lose a nice job if he doesn't keep his mouth shut!"
"None of them keep their mouths shut, captain."
"Yes ... well, I don't know what's up, myself. I'm heading for that conference right now. I'll ask the warden about letting the men out of their cells. What's their attitude?"
The sergeant's broad, red face grew more troubled.
"Uh ... the men aren't hostile, captain. They seem worried, nervous ... kind of scared. If somebody at the top--the warden or yourself--could convince them things were as usual outside ... they'd quiet down, I'm sure."
They were now thirty feet from the door to the administration building a door that opened for but one man at a time. The officers stopped.

"Things are not normal outside," Court growled, "and you know it. I've been wondering how long this prison could go on--as if there were still a state's capital, with its Adult Authority, its governor, its Supreme Court. D'you think every man jack here doesn't know a visit from the Authority's long overdue!"
"Yeah--"
"Well, I'll go in, sarge, and see what's what. If you don't hear from me, stick to routine."
"Right, captain."

He remained where he was while Captain Court walked slowly toward the door, both hands well in sight. A pace from the door he stopped and exchanged a few words with someone watching him through a barred peephole. After a moment, the door slid open and he walked into the building.

He was the last to arrive at the warden's office. Lansing gazed at him in fascination. Goldsmid had been a Golden Gloves champion middleweight before he had heeded the call of the Law, and he looked it. Dr. Slade was the prototype of all overworked doctors. But Court was a type by himself. Lansing thought he'd never seen a colder eye. Yet, the captain's lean face--so unlike the warden's mild, scholarly one--was quiet, composed, unmarked by any weakness of feature or line of self-indulgence. A big, tough man, Lansing mused, a very tough man. But a just one.

* * * * *

"I've a problem, warden," Court said when the introductions were over. "Something we should decide right away."
"Can't it wait?" Knox said irritably.
Lansing almost choked with stifled laughter when Court just glanced briefly at Knox, then said quietly to the warden, "Sergeant Haines has just advised me that the inmates know about these gentlemen and they're--restless. I wonder if we shouldn't keep the men in their cells this afternoon."
"Blast it!" roared Knox. "Can't you people keep a secret?"
"There are no secrets in prison, general," Halloran said mildly. "I learned that my first week as a guard, twenty years ago." To Court he said, "Sit down, Alfred. Unless you disagree strongly, I think we'll let the men out as usual. It's a risk, yes, but right now, the closer we stick to normal routine, the better."
"You're probably right, sir."
Court sat down and Halloran turned to his two visitors.
"Now, gentlemen," he smiled, "we're at your disposal. As I told you, my two associate wardens aren't here. Mr. Briggs is in town and Mr. Tate is home ill. Dr. McCall, our Protestant clergyman, is also home, recovering from a siege with one of those pesky viruses. But we here represent various phases of our administration and can certainly answer all of your questions."
"Questions!" Knox snorted. "We're here to tell you the facts--not ask."
"General," soothed Lansing. He looked across the desk at Halloran and shrugged slightly. The warden twinkled. "General Knox is a trifle ... ah, overblunt, but he's telling you the essential truth of the situation. We've come to take you away from here. Just as soon as you can leave."
"Hey?" cried Slade. "Leave here? The devil, man, I've got to take out a gall bladder this afternoon!"
"I'm afraid I don't understand," murmured Goldsmid. "I thought the war was over--"
"This is all nonsense!" There was an ominous note in Knox's hoarse voice. "Do you people realize you're now under the authority of the Fifth Defense Command?"
Lansing cried: "Let's be sensible about all this!" He pointed his cigar at the fuming soldier. "General, these gentlemen have every right to know the situation and we'll save time if you'll permit me to give them a quick briefing."
"All right! All right!"
"Well, then." Lansing crossed his long legs, glanced nervously about the room, and said, "The world as we know it is done with. Finished. In another week it will be completely uninhabitable."
"Hey," grunted Slade. "You Lansing, the physicist?"
"That's right, doctor."
" Didn't place you at first. Well, what's going to end this lousy old world of ours?"
"Well," Lansing answered, "we wiped out our late antagonists with skill and dispatch. But, in the end, they outsmarted us. Left behind some sort of radioactive dust which ... spreads. It's rolling down on us from Chicago and up from Texas. God knows what other parts of the country are like--we haven't had time to discuss it with them on the radio."
Goldsmid muttered something in Hebrew.
"Isn't that lack of communication rather odd?" asked the warden.
"Not so very. We've been too busy building rocket ships."
"Rocket ships!" Court was jarred out of his icy calm.
"You mean spaceships?" cried the doctor.
"Yes, Slade, they do," murmured the warden.
"Precisely," Lansing said. "When it looked as if the cold war would get rather warm, the allied governments faced up to the fact that our venerable planet might become a ... ah, a battle casualty. So, in carefully selected regions, rather extensive preparations were made for a hurried departure from this sector of the universe."
"Oh, come to the point!" Knox exploded. "All you people need to know is that one of those regions is this area of the Rocky Mountains, that the ships are built and ready to go, and that you're to get aboard. Fast!"
"That," nodded Lansing, "is it."
* * * * *
The four prison officials looked at each other. Halloran and Court sat quiet; Goldsmid slowly dropped his eyes to the ground and his lips moved. Slade scratched his chin.
"Going to Mars, hey?" he asked abruptly.
"That's our destination."
"No, it isn't," Halloran said. "We've been expecting something like this for a long time. Haven't we?"
"Indeed we have," Goldsmid said. "Expecting, but not quite believing."
Halloran looked thoughtfully at the physicist. "Dr. Lansing, these ships of yours ... they're pretty big, I take it?"
"Not as big as we like. They never are. But they'll do. Why?"
"I should remind you that we have well over two thousand inmates here."
"Inmates!" barked the general. "Who the devil said anything about your inmates? Think we'll take a lot of convicts to Mars! Populate it with killers, thieves--"
"Who does go, then?" Halloran did not raise his voice but Knox looked suddenly uneasy.
"Why ... uh, your operating personnel," he replied gruffly. "Your guards, clerks ... hell, man, it's obvious, isn't it?"
"I'm afraid that is out," Goldsmid said. "For me, that is." He stood up, a heavy-shouldered middleweight running a little too fat. "Excuse me, warden, my counseling period's coming up."
"Sit down, Pete," Halloran said quietly. "We haven't finished this conference."

"I admire your sentiments, Rabbi," Lansing said hurriedly, "but surely you realize that we can't take any criminal elements to ... ah, what will be our new world. And we do have a special need for you. We've plenty of your co-religionists among our various personnel, but we don't have an ordained minister for them. They're your responsibility."

"Afraid my first responsibility is here." Goldsmid's voice was quite matter-of-fact.
"So's mine," grunted Slade. "Warden, even if the world ends tomorrow, I've got to get Squeaker Hanley's gall bladder out today. No point in my hanging around any longer is there?"

"Of course there is," Halloran answered. He took a package of cigarettes from his pocket, selected one, and lit it. He exhaled smoke and looked speculatively at Lansing. The scientist felt himself blushing and looked away.

Halloran turned to Court.

"Quite a problem, isn't it, Alfred," he said. "I suppose these gentlemen are right in keeping the inmates off their ships. At any rate, we can't argue the matter--so let's do what we're asked. I think you'd better plan to get the guards out of here tonight, at shift change. Might pass the word to their wives now, so they can start packing a few essentials. Doc," he turned to Slade, "before you get your greedy hands on Squeaker's gall bladder, you'd better round up your staff and have them make the proper arrangements."

"O.K., I'll put it up to them."

"You'll not put it up to them," the warden said sharply. "You'll order them to be ready when the general, here, wants them."
"I'll give no orders," Slade said grimly.
"Just a minute," interposed Court. "Sir, aren't you going?"
"Of course not. But that's neither here nor there--"

The loud clangor of a bell pealed through the room. The two visitors jumped.
"What's that?" cried Knox.
"Yard time," Halloran smiled. "The men are allowed two hours out in the yard, now. They exercise, play games, or just sit around and talk."

"Oh." "Did I understand you correctly, Warden Halloran?" Lansing's bony face was pale now. "Do you refuse to come with us?"

* * * * *

When the bell rang, Joe Mario had been standing near the door to the warden's office, ostensibly filing reports. Now, he closed the drawer with a bang, stretched, and started toward the outside door.

"Where are you going?" the guard asked suspiciously.
"The yard. Where else?"

"Not a word," Mario added virtuously. "I was too busy doin' my work. Anyway, you gotta let me out. My team's got a ball game set for this afternoon."

"Oh ... all right." He looked at the typists. "How about you two? Want out?"

The two men glanced quickly at each other, then shoved back their chairs and got up from their desks.

"Sure," one of them grinned, "I guess we'll take a little air."

* * * * *

Lansing had the feeling he used to have occasionally, back in his university days when he lectured on freshman physics--as if he were talking to a class of deaf students. For, like the hapless freshmen, Warden Halloran was quite obviously not listening to him. But the scientist plunged on. "Sir," he said hoarsely, "we need you. We will need you! I'm a scientist--I know nothing of the problems of ... ah, community living. Neither does Knox. He's accustomed to major crises--and solving them by giving orders. But both of us know there'll come a time when people won't take orders--"

"Absolutely correct," Knox said unexpectedly. "Once we get settled on Mars, the military takes a back seat. And--I mean this, Lansing--I'll be damn' glad of it. When the people get their towns built they'll need some gents with the right kind know-how to help them, show them--"

"That's all very interesting, general, but it's not for me."

"Why not?"

Halloran snubbed out his cigarette, looked up at the general and at the scientist. He smiled briefly. "It's just my job, gentlemen--let's not discuss the matter any further. You can't make me go."

"We will!" barked Knox. "I told you you were under the jurisdiction of the Fifth Defense Command and you are. If I want to, I can send a tank company over here and drag you to those ships!"

"He's right, you know," Lansing said.
Court stood up and took one step toward the general.

"Alfred!" the warden did not lift his voice, but Court stopped. "General Knox," Halloran went on in a conversational tone, "you're being a bit of bully, you know, and in this prison we've all been ... ah, conditioned against bullies." He looked down at his desk and frowned. "However, I'll admit that your position requires that I elaborate my reasons for staying here. Well, then. As I see it, your people, your ... ah, colonists, can help themselves. Most of my people, the inmates here, can't. A long time ago, gentlemen, I decided I'd spend my life helping the one man in our society who seemingly can't help himself, the so-called criminal. I've always felt that society owes a debt to the criminal ... instead of the other way around."

He hesitated, grinned apologetically at Captain Court. "I'm sermonizing again, eh, Alfred? But," he shrugged, "if I must get dramatic about it I can only say that my life's work ends only with my--death."

"It's quite a rough job, you know," Goldsmid remarked. "This is a maximum security institution. Too many of the inmates have disappointed the warden. But he keeps trying and we've learned to follow his example."

"Our psychiatric bunch have done some mighty interesting things," beamed Slade, "even with cases that looked absolutely hopeless."

"None of them can be saved now," muttered Lansing.

"That is in the hands of God," Goldsmid replied.

"Well," Halloran said gently, "still going to send those tanks after me, general?"

"Uh ... no ... I won't interfere with a man doing his duty."

Lansing cleared his throat, looked slowly from the somber-faced clergyman, to the fidgeting medico, to the burly captain, still staring impassively at the general, to, finally, the quiet, smiling warden. "Gentlemen," he said slowly, "it occurs to me that the situation hasn't actually registered on you. The earth is really doomed, you know. This dust simply won't tolerate organic life. In some way--we have not had time to discover how--it's self-multiplying, so, as I said, it spreads. Right now, not a tenth of this entire continent--from the pole down to the Panama Canal--is capable of supporting any kind of life as we know it. And that area is diminishing hourly."

"No way of checking it?" Slade asked. His tone was one of idle curiosity, nothing else.

"No. It's death, gentlemen. As deadly as your ... ah, gallows."

"We use the gas chamber," Halloran corrected him. His mouth twisted. "More humane, you know."

There was brief quiet, then the warden said, "Well ... now that we've finished philosophizing, let's get back to the matter at hand. We can have everyone that's going ready to leave by seven tonight. Will that be satisfactory?"

"It'll have to be," Knox grunted.

"Thank you," Halloran reached for his phone, then dropped his hands on his desk. "Tell me, don't you really have room for our inmates? You haven't told us how many ships you've built. Or how big they are."

Lansing looked at Knox. The general flushed, then stared at the floor. Lansing shrugged tiredly.

"Oh, we've plenty of room," he sighed. "But ... our orders are to take only those completely fit to build a new world. We've ... well, we have practiced a lot of euthanasia lately."

"Judges," murmured Goldsmid.

"If you had come sooner," there was no anger in Halloran's voice, "couldn't you have selected some of our people, those that I ... all of us know are ready for rehabilitation--even on another planet?"

"Perhaps. But no one remembered there was a prison nearby."

The warden looked at the rabbi. Goldsmid raised his heavy shoulders in an ancient Hebraic gesture. "That was always the trouble, wasn't it, Pete?" Halloran murmured. "People never remembered the prisons!"

The telephone beside him shrilled loudly, urgently.

* * * * *

The inmate mopping the floor of Condemned Row's single corridor slowed in front of Bert Doyle's cell. Doyle was slated for a ride down the elevator that night to the death cell behind the gas chamber. At the moment, he was stretched out on his bunk, listening to the soft voice of Father Nelson.

"Sorry to interrupt," the inmate said, "but I thought you'd like to know that all hell's busting loose down in the yard."

Father Nelson looked up.

Doyle, too, looked interested. "A riot?" he asked.

"Yessiree, bob!"

"Nonsense!" snapped the priest. "This prison doesn't have riots!"

"Well, it's sure got one, now. 'Scuse me, Father, but it's the truth. The men grabbed four or five yard guards and the screws in the towers don't dare shoot!"
He gave up all pretense of work and stood, leaning on his mop-handle, his rheumy old eyes glowing with a feverish excitement.

Nelson stood up.
"Will you excuse me, Bert?" he asked. "I'd better see if I can help the warden."

Doyle, too, sat up, swung his feet to the steel floor, stood up and stretched. "Sure," he said. His hard face was pale but otherwise he seemed quite calm. "You've been a great help, Father." He looked quizzically at the old inmate. "You lying, Danny? Seems to me the boys have got nothing to beef about here."

"Heh, they sure have now."

"What?"

"Well, I got this from a guy who got it from Vukich who heard it from Joe Mario. Seems there's a big-shot general and some kinda scientist in Mr. Halloran's office." He shifted his grip on the mop-handle. "You gents maybe won't believe this, but it's what Joe heard 'em say to the warden. Outside is all covered with radium and this general and this here scientist are goin' to Mars an' they want the warden to go along. Leavin' us behind, of course. That's what the boys are riotin' about."

Bert Doyle burst into harsh laughter.
"Danny! Danny!" he cried. "I've been predicting this! You've gone stir-bugs!"

"Ain't neither!"

"Just a moment, Bert," Nelson whispered. Aloud he said, "Dan, go call the guard for me, please." When the old man had shuffled out of earshot the priest said to the condemned man, "It could be true, Bert. By radium, he means radioactive material. And there's no reason spaceships can't get to Mars. We'd reached the Moon before the war started, you know."

Doyle sank back on his bunk.
"Well, I'll be damned!" he breathed.

"Bert!"

Doyle grinned sheepishly. "Force of habit." Then, more soberly, "So they're off to Mars, eh? Father, you better get down there and pick up your reservations!"

"Don't be ridiculous!" The priest's voice softened and he patted the killer's shoulder. "I will go down and see what's what, Bert. And I'll be back just as soon as the men have quieted down. That is, if they are creating a disturbance."

The footsteps of the approaching guard sounded loud in the corridor. Doyle frowned a little.
"When you come back, Father, you'll tell me the truth? No kidding, now!"

The guard stood in front of the door of heavy steel bars. Father Nelson looked down at the man on the bunk.
"I'll tell you everything, Bert. I swear it."

"Uh, Father?" the guard's voice was nervous--and embarrassed.

"Yes, Perkins?"

"I ... I can't let you out right now. Orders from the warden. No cell door opens till I hear from him direct."

Doyle chuckled.
"Might as well sit down, Father," he said, "and make yourself comfortable--"

* * * * *

"What will you do?" cried Lansing.

"Go out and talk to them, of course," replied Halloran. He arose from his desk, a calm, unhurried man.

"Look," growled Knox, "you get me through to the town. Some of our people are still there. I'll order out as many soldiers as you want. I'll see to it that they get here--on the double!"

Halloran flushed. "Would it ease your conscience, general," he grated, "if you killed off my men instead of leaving them--behind! Now, you will please keep quiet. You'll be perfectly safe!"

"What will we do with them, sir?" Court gestured at Lansing and Knox.

Halloran strode from behind his desk to the opposite end of the room. As he twirled the dials of a wall safe he said, "They'll have to remain here, for now. The men have got between this building and the gate office. The safe swung open and he reached far inside and took out a submachine gun. "Here," he held the weapon out to Court. "If I don't come back, use this to get them to the gate office."

"Didn't know you had an arsenal in here!" cried Slade.

"No one else did, either, except Alfred. Now Doc, think you and Pete had better stay here." Slade and Goldsmid pulled themselves out of their chairs as one man. Their timing was perfect.

"No, you don't, hero!" growled Slade.

"Warden," Goldsmid said, "perhaps I could talk to the men--"

The warden smiled and walked toward the door. There he stopped and said to Court, "Switch on the speaker
system, Alfred. I'll take the portable mike from the next office. While I'm out there, get word to all custodial and operating personnel that they will be permitted to leave tonight. Meantime, I hope they will stay on their jobs. Better phone Mr. Tate, have someone try to locate Mr. Briggs, be sure and call Dr. Slade's staff."

"Right, sir."
The three men left the office. Court, the gun cradled under one arm, picked up the phone and spoke into it. His voice was a low, crisp monotone. After a while, he replaced the receiver and stood quiet, staring impassively at the others.

"You might say the warden's career has been twenty years of futility," he muttered. Lansing and Knox felt he wasn't actually speaking to them. "Now me, I'm a screw of the old school. Hardboiled, they say. I never expected a thing from a con ... and cons have lied to him, politicians have broken their promises ... but the liars have loved him and the dumbest dope in the legislature has respected him."

"Will he ... be all right?" Lansing asked.

Court shrugged. "Who knows? You handled this very badly," he said dispassionately. "Five minutes after you stepped through the main gate every inmate in the place knew you were here and started wondering. Why didn't you write--make arrangements to see the warden outside?"

"I'm sorry," Lansing said. "We know very little about prisons."

Court laughed shortly. "You'd better learn," he said grimly.

"Anyway we can see what's going on?" rumbled Knox. "And how about that speaker business?"

"There's a window in the next office. Come along."

* * * * *

They crouched at the window, the fat Knox whizzing a little, because Court had ordered them to keep out of sight of the rioters. They saw Halloran, Slade and Goldsmid at his heels, walking out into the small courtyard that lay between them and safety. Over the wall speaker came a sullen roar, something very like the ragged blast of a rocket whose timing is off. A few gray-clad men in the courtyard saw the approaching warden, surged toward him, screaming at their fellows in the big yard behind them.

Halloran ignored the clutching hands. He held the mike up and they heard him say, "There's no point in my talking with you unless you will be quiet and listen." He paused. The roar slowly subsided into an angry mutter.

"Thanks. That's better."

Now, they could see Slade's head but both Halloran and the rabbi were hidden by the swirl of gray figures that swept around the three prison officials.

"Now," the warden went on, "it seems that you have something to say to me. Good enough. But why didn't you send word through your council, instead of roughing up guards, damaging property, yelling your heads off and generally behaving like a bunch of spoiled brats. Go on, tell me! Why?"

Someone's scream came clearly over the mike. "The world's coming to an end! They're leaving us here to die!"

"Yeah!" the mike picked up another voice. "How about that?"

Before the wordless, mindless roar could rise again, the warden barked, "Oh, hush up!" And they were quiet.

"My God," breathed Lansing.

"Now," Halloran's voice was easy, assured, "I want to make sure that all of you hear me. So, I'm coming out in the center of the yard. Rabbi Pete Goldsmid and Doc Slade insist on coming with me although," he chuckled, "I understand Squeaker Hanley's screaming for the doc to cut out his gall bladder." A few of the men laughed. "All right, here I come. And you fellows behind me, keep off the wire. I don't want this mike to go dead and have to yell my lungs out."

They saw the eddy of men around him move slowly through the broken gate and out of their sight.

"What will he tell them," muttered Knox.

"Whatever--they'll believe it," Court said. The courtyard before them was now empty. He stared thoughtfully out the barred window, then said, "Think you could get to the gate office pretty soon, now--"

"No!" snarled Knox. "I want to see what happens to that gutty so-and-so!"

Lansing grinned nervously. "Somehow, captain, I feel it won't be necessary for us to sneak out of here."

* * * * *

They listened again while assorted thieves, murderers, rapists, men--save for an innocent few--whose hands were consistently raised against their fellows' peace and property, heard their jailor tell them that the end of their world, a world that many of them remembered but dimly, was coming to an end. The screaming broke out again when Halloran spoke of the Mars-bound ships, and, for a moment, the three in the office thought he had lost control. But the amplifiers prevailed and Halloran laughed and said, "Anyway, we're not going to Mars--"

"You can go!"
The man who yelled that was apparently very close to the warden within his view, for they heard him say:
"Chrisman, you're a fool--as usual! Would I bother to come out here and talk to you if I could go?"

That got them. That, they understood. If a guy didn't scram from a hot spot when he could ... well, then, he couldn't scam in the first place. So, the warden was stuck, just like they were.

Later, perhaps, a few of them might figure out why.

"Now, let's have no more interruptions," Halloran said. "I don't think there's any need to go. Neither does the doc, here, or the rabbi. We're all staying--because the desert to the south of us has stopped the spread of this dust and it seems it can't cross the rivers, either. So, we're safe enough."

"But that's not true," groaned Lansing.

Court glanced at him. "Would you tell them different?" he said coldly.

"No--"

Halloran said, "Well, that's that. Life is a little difficult outside and so the people out there want to try to get to Mars. Believe me, that's a trip I want someone else to make first. But if they think life will be easier on those deserts--why, let them go. But God help them--they'll need it."

He paused. Knox tried to catch Lansing's eye, but the scientist's face was blank, unseeing.

"What do we do?" This voice was not hysterical, just seriously questioning.

"You should do darned well. Life should be easy enough for you. You've got your own farms, your livestock, laundry, hospital, shops--everything a man can need. So, take over and run things to suit yourselves."

A unanimous gasp whistled over the speaker. Then, they all cried just one word.

"Us?"

"Why not? Don't you think you can?"

Silence, broken by strange, wistful mutterings.

"I'd suggest this," Halloran said. "Let's follow our normal routine tonight--no lock-ups, of course--and tomorrow, you fellows take over. I'll help you in any way I can. But it will be your job. Perhaps after breakfast tomorrow, you ought to have a mass meeting. Under the supervision of your council, I'd say. You can't keep going without some kind of order, you know."

Again silence.

"My God," whispered Lansing, "he makes it all sound so real."

"Any questions?" Halloran asked.

"Hey, warden! How about the dames?"

"The ladies will join you tomorrow morning." He chuckled. "I imagine they'll be able to handle you all right!"

A joyous roar.

"However," Halloran raised his voice, "I'd like to remind you fellows that a successful community needs ... families!"

There was a long quiet, then, broken finally by an inmate who asked, "Warden, how about the guys up on the Row?"

"Well," Halloran's voice lost all humor, "you can start ripping out the gas chamber whenever you're ready to. I'll see that you get the tools."

The swell of applause was so loud in the office that Court hastily turned down the speaker's volume.

"All right," Halloran said when they had quieted down, "that's about it. You're free now, till supper-time. I'd suggest all of you start right now, thinking about your future--"

* * * * *

Outside the main gate, first Knox, then Lansing shook hands with the gray-faced warden.

"Trucks'll be in town at seven for your people," Knox muttered. He gave a windy sigh. "It's all fouled up. As usual. Damn it, we need people like you, sir!"

Lansing looked at Halloran for a long time, trying to see behind the mask of exhaustion. "I'm a mannerless fool," he said at last. "But Mr. Halloran, would you tell me what you're thinking? I mean, really thinking? Even if it's rough on us!"

Halloran laughed softly. "I wasn't thinking about you at all, Dr. Lansing. I was--and am--regretting that what I told the men couldn't be the truth. It's too bad they'll have so short a time. It would be very interesting to see what they would do with--life."

Knox scowled. "Seems like they haven't done much with it so far."

"Come along, general," Lansing said quietly. "You don't understand. None of us do. We never did."

THE END
"Why don't you find yourself some nice little American girl," his father had often repeated. But George was on Venus ... and he loved pale green skin ... and globular heads and most of all, George loved Gistla.

George Kenington was sixteen, and, as he told himself, someone who was sixteen knew more about love than someone who was, say, forty-two. Like his father, for instance. A whole lot more probably. When you were forty-two, you got narrow-minded and nervous and angry. You said this is this, and that is that, and there is nothing else. When someone thought and felt and talked that way, George thought bitterly, there was not enough room inside that person to know what it was like, loving a Venusian.

But George knew. He knew very well.

Her name was Gistla. She was not pretty in standards of American colonists. She had the pale greenish Venusian skin, and she was too short and rather thick. Her face, of course, was not an American face. It was the face of native Venus. Round and smooth, with the large lidless eyes. There were no visible ears and a lack of hair strengthened the globular look of her head.

But she was a person. The beauty was inside of her. Did you have to point to a girl's face and say, "Here is where the nose should be, here is where the ears should be?" Did you have to measure the width between eyes and test the color of the skin? Did you have to check the size of the teeth and the existence of hair? Was all of this necessary to understand what was inside someone?

George snapped a leaf from an overhanging vine and threw it angrily to the ground. He was walking along a thin path that led from the colony to the tangled hills beyond, where hues of red and yellow and purple reflected like bold sweeps of watercolor. In a moment he would see Gistla, and with the color before his eyes and the sweet perfume of the flowers in his lungs, he felt again the familiar rise of excitement.

George had not always lived on Venus. The Colony was very new. By 2022, most of the Earth countries had sent colonizers to Mars. But as yet, in June of that year, Venus had been touched by only the sparsest invasion of American civilization. George had arrived just three years ago, when his father had been appointed Secretary of the colonizing unit.

And that was the whole trouble, really. Father was the Secretary, Mother was the Secretary's wife, Sister was the daughter of the Secretary. Everybody was wrapped up in it. Except George.

George loved Gistla.

"Why don't you find yourself some nice little American girl?" his father had said. "Say like Henry Farrel's little daughter?"

Henry Farrel's little daughter was a sweet sickening girl with a nasty temper and a nasty tongue. Her father was Governor of the Colony. She told you about it all the time.

"Or," his father had told him, "why not little what's-her-name, Doug Brentwood's daughter?"

Little what's-her-name's father was the President of the Council. "My father is President of the Council," she said. Over and over, as though in a settlement the size of the Colony, there would be anyone who wouldn't know her father was the President of the Council.

It was all a very tight and careful circle, chosen on Earth with a great deal of "common sense."

There were the ordinary settlers, of course. They had daughters. Some of them were very pretty and long-limbed. And George had thought about that.

Certainly there wasn't a decent-looking girl in the whole Governing circle, and the sight of a girl with flashing eyes and a nice red mouth, who was shaped a little like something besides a tree stump, was indeed an exciting sight.

But there were limitations to the settler girls.

They had no background to speak of, and though that didn't make any difference, George assured himself, they knew nothing about art, music, poetry, or anything really worth while. And, too, while George's father had said, "Now, George, we're all one here. Each of us is as good as another. Joe Finch, who cares for the flowers outside, is every bit as good a man as I am"--still George knew, if he told his parents he was going to marry Joe Finch's daughter someday, there would be hell to pay.

So as long as the restrictions had been bound around him, there was no reason to go just half-way. George was not an ordinary boy. He did things in extreme. He was now in love with a Venusian girl, and his family was already starting to make him pay.
George turned off the path, just beyond an arch of thick purple-green vines that always reminded him of a gate to a garden. There was a quiet simplicity to this small clearing where he and Gistla met. There was an aloneness to it, and only the sound of the flat shiny leaves sliding together and the high, trilling sound of the small Venusian birds broke the peaceful silence. They had always met here, nowhere else.

Now, as George found himself in the clearing, he began to wonder what Gistla would say or do when he told her he was taking her home to meet his family. It had been a sudden decision, brought out of anger and indignation.

George sat down upon the flat hollow of a large vine. The sky was murky as usual, but the soft warm feel and smell of the growth around him, with its color and brightness, made up for a sunless sky.

As he waited, he remembered what his mother had said:
"Oh, George, you're really not serious about bringing a Venusian into our home!"
And his sister, Mari, had said, "My God!" Mari, who was eighteen, said this to most anything.
But his father, eyes bright and alert, had said, "No, now if George wants to bring one of these, ah, Venusians home with him, that's his privilege. I think it would be very interesting."
George knew what his father meant by interesting.

Exposing Gistla to his family would result in deliberate sarcasm and eye-squinting and barely hidden smiles. There would be pointed remarks and direct insults. And when it was over, George knew, he would be expected to see the error of his ways. He would then be expected to forget about this odd creature and find himself a nice ignorant little Colony girl, whose father was a member of the Governing circle.

"And to hell with that, too," George said.
"What?" George heard Gistla say. He turned quickly. She was standing at the edge of the clearing, her round green eyes looking soft and serious. She wore the usual gray cape that reached her ankles. Her voice was a deep round sound, and there was hardly any accent in the words she had learned so quickly since the Colony had begun.
"Talking to myself," George grinned. The old excitement was inside of him. There was a kind of exotic quality in meeting Gistla that never disappeared.

She crossed the clearing, not too gracefully, and touched her fingers against his hand. This had been the extent of their physical expression of love.
"It is nice to see you, George."
He noticed his feeling of pleasure when he heard her speak his name. There was something about his own name being spoken by Gistla that had always seemed even more strange than anything else.

She sat down beside him, and they looked at each other while the leaves whispered around them and the birds fluttered and chirped. He discovered again the feeling of rightness, sitting beside Gistla. There was a solidity about her, a quiet maturity that he seemed able to feel in himself only when he was with her. And that too was strange, because in American terms of age, she was much younger than he.

Sitting, as they were doing, silent, watching each other, had been most of their activity. You did not need to entertain Gistla with foolish small-talk or exaggerated praising.

But right now he wanted to tell her quickly, to make sure that she would feel the enthusiasm he had felt.
"Listen, Gistla," he said, while she watched him with her soft-looking round eyes. "I want you to come with me today to meet my family."

His words seemed to have an odd ring to them, and George waited tensely until he was sure that she was not shocked or angry about what he had just said.

She sat silently for a moment and then she said, "Do you think that is right for me to do, George?"
"Sure it is! Why not? They know about you and me. They know we're in love."
"Love--" She spoke the word as though it were an indefinite, elusive thing that you could not offer as reason for doing anything.

Gistla was very wise, George realized, but this was a time for enthusiasm, a time to strengthen their own relationship in this world.
"Say you will!" George said.
"Do you want me to?"
"Well, sure I do. What did you think?"
She held her hands in her lap quietly. They were not unlike his own, George observed, except for the extreme smallness and the color.
"I do not think it will be nice for you or them," she said.
"Ah, listen, Gistla. Don't talk that way. I'll be fine!" But he knew that he was not deceiving her with the lightness he tried to put into his voice.

Then, although she had never done it before, she reached out and touched his cheek. George had grown used to
the emotions that reflected on her face, and he knew she was suddenly very sad. "Yes, George," she said. "I will go with you to meet your family." And she said it as though she were telling him good-by.

* * * * *

It was no better than he had expected. It was worse. Much worse. And he was growing angrier by the moment. They were all seated in the rock-walled patio behind the large white house. Gistla sat beside him, looking very small and frightened and very different. And it was that obvious difference that George had hoped everyone might ignore. But instead, each of them, his father, his mother, his sister, appeared to be trying to make it even more obvious.

The first strain, when everyone had sat there staring at Gistla as though she were something behind a cage, had passed. But now his parents and sister were moving in a new direction. They had relaxed, having found control of the situation, and they were cutting her to pieces.

"Tell me," his sister was saying, her eyes dancing slyly, "don't you people have some very strange tricks you can do?"

George tightened his fingers against his palms. He heard Gistla answer, "Tricks?"

"Yes." His sister's white smile shined. "You know, like making things disappear, things like that."

"My father," Gistla said seriously, "can do very wonderful things. He is a musician."

George's father leaned forward, blinking amusedly. "Really? What does he play?"

"Play?" asked Gistla.

"Yes. He's a musician. He must play something, some kind of instrument."

Gistla looked at George, but George did not know what to say. He wished he had never tried to do this. He wished he had just ignored his family and gone on loving Gistla in the privacy of his own emotions.

"Well, now," Mr. Kenington was saying rather impatiently. "Does he play something like our violin or clarinet or oboe, or what?" His father, George had noticed, was becoming impatient more frequently since he had become Secretary. The Secretarial post was very important.

"He does not play anything," Gistla said carefully. "He just ... makes the music and I hear it."

"But how?" Mr. Kenington insisted. "What does he play the music on? He certainly can't make the music without using something to make it on."

Gistla glanced again at George and he said quickly, "It's pretty hard to understand, Father. I don't think--"

"No, now don't interrupt just now, son. This is very interesting. We'd like to know what she's talking about."

Mrs. Kenington spoke for the first time. "Are you just making this up?"

It was like a whip coming through the air. His mother sat there, blinking, the suspicion and distrust she felt for this creature showing in her eyes and upon her mouth and even in the way she was sitting.

"Now, Lois," Mr. Kenington said, as though he really sympathized with what she had said, believing that not only Gistla was making it up, but that all of her race made everything up. But he was stubborn. "Come now, tell us. Tell us what you mean."

Gistla's smooth head turned this way and that. "Sometimes," she said slowly, "my father journeys to other places, and if he cannot return soon, he sends me music. When the light has gone from the day and I am alone, I hear it."

"You mean he sends it by wires or by radio?" Mr. Kenington asked with surprise.

"No."

"Now, wait a minute," George's sister leaned forward, smiling. "You just hear this music, is that right? Up here." She tapped her forehead.

"Yes," said Gistla.

"My God," George's sister said. She looked at her parents, arching her eyebrows.

"You shouldn't make things up," George's mother said.

"Mother," George said, his face coloring. "She's not making things up!"

"Just a moment, son," Mr. Kenington said crisply. "You don't want to talk to your mother in that tone."

"No, but, my God," George's sister went on. "Imagine. No wires, no loudspeakers, just ... up here." She tapped her forehead again.

"I'm not talking to my mother in any tone at all," George said, disregarding his sister.

"Well, she shouldn't lie," said Mrs. Kenington with conviction.

George stood up. "She is not lying, Mother."

"I forbid you to argue with your mother that way, George," said Mr. Kenington.

"I mean, my God," said George's sister happily. "This is an innovation! Can you imagine? Gistla, or whatever your name is, could your father make his music sometime when we have a dance?"

Gistla's eyes were hurt and she was, George knew, confused. She shook her head.

Mrs. Kenington was blinking accusingly. "Do they teach you to make these things up? Is that what they teach
"Mother, will you please?" George said. "Why must you talk to her that way?"

Mr. Kenington stood up quickly. "I did not raise my son to show an attitude like that to his mother."

"But she isn't making this up," George said. "You asked her to tell you and she--"

George's sister had jumped out of her chair and she was waltzing over the patio. She began humming as she danced. "Can't you just see it? Everyone dancing around, listening to music in their heads? No orchestra or records or anything?"

Mr. Kenington stood very tall. "Are you taking the word of your mother, or this ... this ..." He motioned curtly at Gistla.

George licked his lips, looking defensively at each one of his family. "It isn't a matter of taking anyone's word at all. It's just something we don't understand."

George's sister whirled and then suddenly she stopped, putting her hand against her mouth. "My God, what if everyone got the music different? I mean, does everyone hear the same music, dear? Because if they didn't, what a mess!" She began dancing again, her skirt swirling over the bricks of the patio.

Mr. Kenington's voice was louder. "I think we understand, all right, George. There isn't anything about this we don't understand!"

George's lips were paling.

His sister dipped and turned. "We could call it a Music In The Head dance. Everybody brings his own head!"

She laughed merrily. "My God!"

George noticed then that Gistla was disappearing out of the rear gate. He stood, clenching his fists and glaring at his family. His sister had stopped dancing but she was still laughing.

"I didn't think, George," his mother said resolutely, "that you were going to invite someone who lied."

George turned and ran after Gistla.

* * * * *

They sat again in the clearing. George could still feel the anger churning inside him, and he held his hands together so tightly that his fingers began to ache. "I hate them for that," he said.

Gistla touched his arm. "No, George. It is all right. It is the way things are."

"But they don't need to be! My family did that on purpose."

"They just don't understand. My race is very different from yours and it seems strange."

"So does mine," George said, standing and beginning to pace back and forth.

It had been what he really had expected. But still he had hoped, somehow, that his family might have understood. He looked at Gistla, sitting quietly, her large eyes watching him. He knew he loved her very much just then, more in fact than he ever had before, because she had been refused by his family.

"Listen, Gistla," he said, kneeling on the grass in front of her. "It won't make any difference what anyone thinks or does or says. I love you, and I'll go on loving you. We'll build our own life the way we want it."

She shook her head slowly. "You cannot forget your family or your people. That is important to you. I would only hurt you."

"Do you love me?"

"Yes."

"Then that's all that's important to me. Not what anyone thinks. Not what my sister thinks or my father or my mother."

"We are different, you and I." She sat unmoving, her smooth face unchanging. "My people seem strange to yours because we can do things your people do not understand. We seem strange because we look differently, we act differently, we value things differently."

"My values are the same as yours," George pleaded. "I love you because of what you are, not because of some kind of stupid chart for physical beauty, not because ..."

"Look at me."

George met her eyes suddenly, caught by the urgency in her voice. And slowly, in front of his eyes, she changed. Her features shifted, until George saw a beautiful young girl with pink white skin and red lips. He saw shining blue eyes and shimmering golden hair that fell over her shoulders. Gistla's body had changed to a lithe, smooth figure that revealed its contours beneath the gray cape.

He caught his breath and wiped a hand at his eyes.

"What you see," said Gistla softly, "is an illusion. You see what would be in your values, a beautiful girl."

George opened his mouth but was unable to find his voice.

"Do not be afraid, George. Beneath the illusion of your senses, I am still Gistla. I am still a Venusian."

George reached out and touched his fingers against a white arm and a white shoulder bared by the cape. He
touched the golden hair. "Gistla," he said, amazed. "You're beautiful."

"Yes," she said sadly.

"But—you really are! Your hair and your eyes and your mouth. How did you do it?"

She shook her head to show its unimportance. "It is something—like your hypnotism."

George raised himself from his knees and sat beside her. "But I can't believe it!"

"You can see, you can feel."

"Yes," George said. "Yes."

"You are happy with me this way, aren't you, George?"

"But you're so beautiful."

The golden-haired girl nodded her head, and the shining blue eyes watched him carefully.

"You see then," Gistla said. "It does make a difference. You love me more this way."

"No," George said, touching her hair again. "I don't love you more, but if you can do this, why then, we'll have no more worries. Don't you see?"

"I think so," Gistla said, looking away. George's voice was excited, and his eyes darted over her face and body. "Would other people see you as I do?"

"If I wished, yes."

"Then you see? It's all changed! You are what I see. Golden-haired and pale-skinned—"

"I am still Gistla. You would always know that. Would you love something that is not real, just because you see it with your eyes?"

* * * * *

"But I can feel that you're real," George said, putting his hands on her shoulders. He pulled her closer and kissed her hair. "You're Gistla," he said, "and you're beautiful." He tipped her face up to his and bent to kiss her mouth.

His lips touched smooth green skin and he looked into Gistla's large round lidless eyes. He recoiled as though he had been touched by fire.

She watched him as he wiped a trembling hand across his chest, and her globular head glistened in the reflection of the late sun.

She nodded. "When you see what I really am, the difference is important." She gathered her cloak around her and stood up.

George felt the flush of his face, and he could not meet her eyes. He heard her walk a few steps away.

"Good-by, George," she said.

He jumped up quickly. "That wasn't fair."

"No," she said slowly, "but it proved the value of things."

"It wasn't fair," George repeated. "And it didn't prove anything."

"I think it did," she said, moving away.

"No, listen, Gistla," he said. "You can't judge anything by what I did or said. We are different, in a physical sense, but that doesn't really matter. If a golden-haired girl materializes in front of my eyes, you can't blame me for what my emotions did. It's still you I love. Not the color of your skin or the shape of your mouth. But you and what you or I or anybody else looks like isn't important!"

He followed her and caught her arm. She turned to face him. "You can say that," she said. "Your words tell me that and your eyes, but I know it isn't true."

The embarrassment was still inside him, but the way she denied him made him want her more than ever. He held to her arm and then he said, "Gistla, could you change me? I mean, so that other people, even I, would see me as they see you—as a Venusian?"

She stood very still, staring at him.

"Could you?" he asked.

"Yes."

"Then do it, Gistla. I'll prove to you that nothing is important but you and me. I'll be a Venusian, like you are. I'll go back to my family as a Venusian and I'll take you with me. I'll prove that neither they nor anybody else makes any difference in how I love you!"

Gistla watched him solemnly. Finally she said, "Would you really do that?"

"Yes," he said quickly, "Yes."

"I love you, George," she said in her deep round voice.

He lifted his hands to touch her face and he found that his skin had turned to pale green. He touched his own face, and he knew that if he looked into a mirror he would see a round smooth head with large lidless eyes.

"Is that what you wanted?" she asked.
"Yes," he said stubbornly. "That's what I wanted." He stood there for a long time, trying to become used to it, fighting the fear that ran through him every time he looked at his hands or touched his head. Finally he said, quietly, "Let's go meet my family."

As they drew near the house, he knew his family was still in the patio. He could hear the voices of his mother and father and the high, piercing laughter of his sister.

"And, my God," he heard his sister say, "did you see the way those horrible eyes looked at you? What ever gets into George?"

"Dear, dear, dear," he heard his mother say.

Gistla was looking at him. "You do not have to do this."

"Yes," he said, feeling his heart jump. "I do."

He took her hand and they walked to the gate of the patio. He stood there, feeling Gistla's hand tighten about his own. And as he said, "Hello, everybody," he felt his breath shorten as though he had suddenly gotten stage fright.

He saw his father turn around. "What's this?" Mr. Kenington said, frowning.

"Hello, Father," George said.

"Father," Mr. Kenington repeated. "What are you doing in this patio?"

"I brought Gistla back."

"So I see," said Mr. Kenington, his eyes narrow as he looked at Gistla. "Where's George?"

"I'm George."

"I'm not in the mood for joking with Venusians," his father snapped. "What made you think you could come in here like this?"

Gistla's hand tightened again. "Try to understand," George said. "Gistla--"

"What's going on?" his sister interrupted.

"Gistla, or whatever her name is," Mr. Kenington said, "has brought a friend of hers, another Venusian." He said the word, Venusian, as though it were a curse or a filthy word.

"My God," said his sister, squinting at them.

Mrs. Kenington leaned over in her chair, peering. "Tell them not to come into the patio, Harry," she said to her husband.

"Listen, Father," George said, feeling the panic begin. "Gistla changed my appearance, so that I seem to look like a Venusian. I came here to tell you that it doesn't make any difference what I look like, whether I look like a Venusian or a leaf on a vine or anything else. I still love her, and it doesn't make any difference." He heard his voice rising and becoming louder.


"Harry," his mother said. "They frighten me. Can't you make them keep off the patio?"

"Mother--" George began.

"Now see here," Mr. Kenington growled. "You know we don't allow Venusians around here. I'd advise you to get out of here. Quick!"

"Why does he keep calling you father and mother?" his sister asked. "Isn't that queer, how he keeps doing that? Make some music," she said to George.

George could see the hatred in his father's eyes and in his mother's. And behind his sister's sarcastic smile, he could see the hatred there, too. He felt himself getting more tense, and the panic raced through him.

"Listen," he shouted. "I'm George, don't you understand? George!"

"I don't want to tell you again," his father said, his face very red. "I don't know what your little game is, but it isn't coming off, and so I'll tell you just this one time. You get the hell off this property, or I'll ..."

"Listen," George yelled. "I'M GEORGE! Don't you understand?"

His father's lips thinned to a white line, and he began shouting for Joe Finch, the gardener.

George knew what he should have done then, he should have taken Gistla and gone. He should have walked with her, hand in hand, down the road and away from there. But instead, the panic made his heart pound and he saw the hatred all around him. He couldn't help it when he shouted to her, "Gistla! For God's sake, change me back! Right now! Gistla!"

He stood there, breathing hard, his muscles knotted like steel, while she stared at him, looking into his eyes.

Suddenly, he heard his father gasp and say, "George!"

He looked at his hands and they were white and he felt of his face and it was his own. He saw his sister's hand against her mouth, and his father stared at him with unbelieving eyes. His mother had gotten up and was coming over to him, her eyes blinking. "George," she said, "what did they do to you?" She patted his shoulder, her hands fluttering like bird wings.
He turned back to Gistla and she was gone. Beyond the gate now, he knew, and walking slowly, alone, down the road. Only this time he would not go after her. He couldn't. And as he stood there, feeling his mother's hand patting his shoulder, hearing his sister say, "My God," seeing his father shake his head slowly, he felt very young and at the same time, very old, and he wanted to cry.

---

He was running, running down the long tunnels, the shadows hunting him, claws clutching at him, nearer...

In the waiting windless dark, Lewis Stillman pressed into the building-front shadows along Wilshire Boulevard. Breathing softly, the automatic poised and ready in his hand, he advanced with animal stealth toward Western, gliding over the night-cool concrete, past ravaged clothing shops, drug and ten-cent stores, their windows shattered, their doors ajar and swinging. The city of Los Angeles, painted in cold moonlight, was an immense graveyard; the tall white tombstone buildings thrust up from the silent pavement, shadow-carved and lonely. Overturned metal corpses of trucks, busses and automobiles littered the streets.

He paused under the wide marquee of the FOX WILTERN. Above his head, rows of splintered display bulbs gaped—sharp glass teeth in wooden jaws. Lewis Stillman felt as though they might drop at any moment to pierce his body.

Four more blocks to cover. His destination: a small corner delicatessen four blocks south of Wilshire, on Western. Tonight he intended bypassing the larger stores like Safeway or Thriftimart, with their available supplies of exotic foods; a smaller grocery was far more likely to have what he needed. He was finding it more and more difficult to locate basic food stuffs. In the big supermarkets only the more exotic and highly spiced canned and bottled goods remained—and he was sick of caviar and oysters!

Crossing Western, he had almost reached the far curb when he saw some of them. He dropped immediately to his knees behind the rusting bulk of an Olds 88. The rear door on his side was open, and he cautiously eased himself into the back seat of the deserted car. Releasing the safety catch on the automatic, he peered through the cracked window at six or seven of them, as they moved toward him along the street. God! Had he been seen? He couldn't be sure. Perhaps they were aware of his position! He should have remained on the open street where he'd have a running chance. Perhaps, if his aim were true, he could kill most of them; but, even with its silencer, the gun would be heard and more of them would come. He dared not fire until he was certain they discovered him.

They came closer, their small dark bodies crowding the walk, six of them, chattering, leaping, cruel mouths open, eyes glittering under the moon. Closer. The shrill pipings increased, rose in volume. Closer. Now he could make out their sharp teeth and matted hair. Only a few feet from the car... His hand was moist on the handle of the automatic; his heart thundered against his chest. Seconds away...

Now!

Lewis Stillman fell heavily back against the dusty seat-cushion, the gun loose in his trembling hand. They had passed by; they had missed him. Their thin pipings diminished, grew faint with distance.

The tomb silence of late night settled around him.

* * * * *

The delicatessen proved a real windfall. The shelves were relatively untouched and he had a wide choice of tinned goods. He found an empty cardboard box and hastily began to transfer the cans from the shelf nearest him.

A noise from behind—a padding, scraping sound.

Lewis Stillman whirled around, the automatic ready.

A huge mongrel dog faced him, growling deep in its throat, four legs braced for assault. The blunt ears were laid flat along the short-haired skull and a thin trickle of saliva seeped from the killing jaws. The beast's powerful chest-muscles were bunched for the spring when Stillman acted.

The gun, he knew, was useless; the shots would be heard. Therefore, with the full strength of his left arm, he hurled a heavy can at the dog's head. The stunned animal staggered under the blow, legs buckling. Hurriedly, Stillman gathered his supplies and made his way back to the street.

How much longer can my luck hold? Lewis Stillman wondered, as he bolted the door. He placed the box of tinned goods on a wooden table and lit the tall lamp nearby. Its flickering orange glow illumined the narrow, low-
ceilinged room as Stillman seated himself on one of three chairs facing the table.

Twice tonight, his mind told him, twice you've escaped them--and they could have seen you easily on both occasions if they had been watching for you. They don't know you're alive. But when they find out ...

He forced his thoughts away from the scene in his mind away from the horror; quickly he stood up and began to unload the box, placing the cans on a long shelf along the far side of the room.

He began to think of women, of a girl named Joan, and of how much he had loved her ...

The world of Lewis Stillman was damp and lightless; it was narrow and its cold stone walls pressed in upon him as he moved. He had been walking for several hours; sometimes he would run, because he knew his leg muscles must be kept strong, but he was walking now, following the thin yellow beam of his hooded lantern. He was searching.

Tonight, he thought, I might find another like myself. Surely, someone is down here; I'll find someone if I keep searching. I must find someone!

But he knew he would not. He knew he would find only chill emptiness ahead of him in the tunnels.

For three long years he had been searching for another man or woman down here in this world under the city. For three years he had prowled the seven hundred miles of storm drains which threaded their way under the skin of Los Angeles like the veins in a giant's body--and he had found nothing. Nothing.

Even now, after all the days and nights of search, he could not really accept the fact that he was alone, that he was the last man alive in a city of seven million, that all the others were dead.

He paused, resting his back against the cold stone. Some of them were moving over the street above his head. He listened to the sharp scuffling sounds on the pavement and swore bitterly.

"Damn you," said Lewis Stillman levelly. "Damn all of you!"

Lewis Stillman was running down the long tunnels. Behind him a tide of midget shadows washed from wall to wall; high keening cries, doubled and tripled by echoes, rang in his ears. Claws reached for him; he felt panting breath, like hot smoke, on the back of his neck; his lungs were bursting, his entire body aflame.

He looked down at his fast-pumping legs, doing their job with pistoned precision. He listened to the sharp slap of his heels against the floor of the tunnel--and he thought: I might die at any moment, but my legs will escape! They will run on down the endless drains and never be caught. They move so fast while my heavy awkward upper-body rocks and sways above them, slowing them down, tiring them--making them angry. How my legs must hate me! I must be clever and humor them, beg them to take me along to safety. How well they run, how sleek and fine!

Then he felt himself coming apart. His legs were detaching themselves from his upper-body. He cried out in horror, flailing the air with his arms, beseeching them not to leave him behind. But the legs cruelly continued to unfasten themselves. In a cold surge of terror, Lewis Stillman felt himself tipping, falling toward the damp floor--while his legs raced on with a wild animal life of their own. He opened his mouth, high above the insane legs, and screamed.

Ending the nightmare.

He sat up stiffly in his cot, gasping, drenched in sweat. He drew in a long shuddering breath and reached for a cigarette. He lit it with a trembling hand.

The nightmares were getting worse. He realized that his mind was rebelling as he slept, spilling forth the bottled-up fears of the day during the night hours.

He thought once more about the beginning six years ago, about why he was still alive, the last of his kind. The alien ships had struck Earth suddenly, without warning. Their attack had been thorough and deadly. In a matter of hours the aliens had accomplished their clever mission--and he thought: I might die at any moment, but my legs will escape! They will run on down the endless drains and never be caught. They move so fast while my heavy awkward upper-body rocks and sways above them, slowing them down, tiring them--making them angry. How my legs must hate me! I must be clever and humor them, beg them to take me along to safety. How well they run, how sleek and fine!

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seeing it, but close enough for light to seep in during the sunlight hours. He missed the warm feel of open sun on his body almost as much as he missed the companionship of others, but he could not think of risking himself above the drains by day.

Sometimes he got insane thoughts. Sometimes, when the loneliness closed in like an immense fist and he could no longer stand the sound of his own voice, he would think of bringing one of them down with him, into the drains. One at a time, they could be handled. Then he’d remember their sharp savage eyes, their animal ferocity, and he would realize that the idea was impossible. If one of their kind disappeared, suddenly and without trace, others would certainly become suspicious, begin to search for him—and it would all be over.

Lewis Stillman settled back into his pillow, pulling the blankets tight about his body. He closed his eyes and tried not to listen to the distant screams, pipings and reedy cries filtering down from the street above his head.

Finally he slept.

* * * * *

He spent the afternoon with paper women. He lingered over the pages of some yellowed fashion magazines, looking at all the beautifully photographed models in their fine clothes. All slim and enchanting, these page-women, with their cool enticing eyes and perfect smiles, all grace and softness and glitter and swirled cloth. He touched their images with gentle fingers, stroking the tawny paper hair, as though, by some magic formula, he might imbue them with life. It was easy to imagine that these women had never really lived at all—that they were simply painted, in microscopic detail, by sly artists to give the illusion of photos. He didn't like to think about these women and how they died.

That evening Lewis Stillman watched the moon, round and high and yellow in the night sky, and he thought of his father, and of the long hikes through the moonlit Maine countryside, of hunting trips and warm campfires, of the Maine woods, rich and green in summer. He thought of his father’s hopes for his future and the words of that tall, gray-haired figure came back to him.

"You'll be a fine doctor, Lewis. Study and work hard and you'll succeed. I know you will."

He remembered the long winter evenings of study at his father's great mahogany desk, pouring over medical books and journals, taking notes, sifting and re-sifting facts. He remembered one set of books in particular—Erickson's monumental three-volume text on surgery, richly bound and stamped in gold. He had always loved these books, above all others.

What had gone wrong along the way? Somehow, the dream had faded, the bright goal vanished and was lost. After a year of pre-med at the University of Southern Cal, he had given up medicine; he had become discouraged and quit college to take a laborer's job with a construction company. How ironic that this move should have saved his life! He'd wanted to work with his hands, to sweat and labor with the muscles of his body. He'd wanted to earn enough to marry Joan and then, later perhaps, he would have returned to finish his courses. It all seemed so far away now, his reason for quitting, for letting his father down.

Now, at this moment, an overwhelming desire gripped him, a desire to pour over Erickson's pages once again, to re-create, even for a brief moment, the comfort and happiness of his childhood.

He'd seen a duplicate set on the second floor of Pickwick's book store in Hollywood, in their used book department, and now he knew he must go after them, bring the books back with him to the drains. It was a dangerous and foolish desire, but he knew he would obey it. Despite the risk of death, he would go after the books tonight. Tonight.

* * * * *

One corner of Lewis Stillman's room was reserved for weapons. His prize, a Thompson submachine, had been procured from the Los Angeles police arsenal. Supplementing the Thompson were two semi-automatic rifles, a Luger, a Colt .45 and a .22-caliber Hornet pistol, equipped with a silencer. He always kept the smallest gun in a spring-clip holster beneath his armpit, but it was not his habit to carry any of the larger weapons with him into the city. On this night, however, things were different.

The drains ended two miles short of Hollywood--which means he would be forced to cover a long and particularly hazardous stretch of ground in order to reach the book store. He therefore decided to take along the .30-caliber Savage rifle in addition to the small hand weapon.

You're a fool, Lewis, he told himself, as he slid the oiled Savage from its leather case. Are the books important enough to risk your life? Yes, another part of him replied, they are that important. If you want a thing badly enough and the thing is worthwhile, then you must go after it. If fear holds you like a rat in the dark, then you are worse than a coward; you betray yourself and the civilization you represent. Go out and bring the books back.

Running in the chill night wind. Grass, now pavement, now grass, beneath his feet. Ducking into shadows, moving stealthily past shops and theatres, rushing under the cold moon. Santa Monica Boulevard, then Highland, the Hollywood Boulevard, and finally--after an eternity of heartbeats--the book store.
Pickwick’s.

Lewis Stillman, his rifle over one shoulder, the small automatic gleaming in his hand, edged silently into the store.

A paper battleground met his eyes.
In the filtered moonlight, a white blanket of broken-backed volumes spilled across the entire lower floor. Stillman shuddered; he could envision them, shrieking, scrabbling at the shelves, throwing books wildly across the room at one another. Screaming, ripping, destroying.
What of the other floors? What of the medical section?
He crossed to the stairs, spilled pages crackling like a fall of dry leaves under his step, and sprinted up the first short flight to the mezzanine. Similar chaos!
He hurried up to the second floor, stumbling, terribly afraid of what he might find. Reaching the top, his heart thudding, he squinted into the dimness.
The books were undisturbed. Apparently they had tired of their game before reaching these.
He slipped the rifle from his shoulder and placed it near the stairs. Dust lay thick all around him, powdering up and swirling, as he moved down the narrow aisles; a damp, leathery mustiness lived in the air, an odor of mold and neglect.
Lewis Stillman paused before a dim hand-lettered sign: MEDICAL SECTION. It was just as he had remembered it. Holstering the small automatic, he struck a match, shading the flame with a cupped hand as he moved it along the rows of faded titles. Carter ... Davidson ... Enright ... Erickson. He drew in his breath sharply. All three volumes, their gold stamping dust-dulled but readable, stood in tall and perfect order on the shelf.
In the darkness, Lewis Stillman carefully removed each volume, blowing it free of dust. At last all three books were clean and solid in his hands.
Well, you’ve done it. You’ve reached the books and now they belong to you.
He smiled, thinking of the moment when he would be able to sit down at the table with his treasure, and linger again and again over the wonderous pages.
He found an empty carton at the rear of the store and placed the books inside. Returning to the stairs, he shouldered the rifle and began his descent to the lower floor.
So far, he told himself, my luck is still holding.
But as Lewis Stillman’s foot touched the final stair, his luck ran out.
The entire lower floor was alive with them!

Now, suddenly, the books no longer mattered. Now only his life mattered and nothing else. He moved back against the hard wood of the stair-rail, the carton of books sliding from his hands. They had stopped at the foot of the stair; they were silent, looking up at him, the hate in their eyes.
If you can reach the street, Stillman told himself, then you’ve still got half a chance. That means you’ve got to get through them to the door. All right then, move.
Lewis Stillman squeezed the trigger of the automatic and three shots echoed through the silent store. Two of them fell under the bullets as Stillman rushed into their midst.
He felt sharp nails claw at his shirt and trousers, heard the cloth ripping away in their grasp. He kept firing the small automatic into them, and three more dropped under the hail of bullets, shrieking in pain and surprise. The others spilled back, screaming, from the door.
The gun was empty. He tossed it away, swinging the heavy Savage rifle free from his shoulder as he reached the street. The night air, crisp and cool in his lungs, gave him instant hope.
I can still make it, thought Stillman, as he leaped the curb and plunged across the pavement. If those shots weren’t heard, then I’ve still got the edge. My legs are strong; I can outdistance them.
Luck, however, had failed him completely on this night. Near the intersection of Hollywood Boulevard and Highland, a fresh pack of them swarmed toward him over the street.
He dropped to one knee and fired into their ranks, the Savage jerking in his hands. They scattered to either side.
He began to run steadily down the middle of Hollywood Boulevard, using the butt of the heavy rifle like a battering ram as they came at him. As he neared Highland, three of them darted directly into his path. Stillman fired. One doubled over, lurching crazily into a jagged plate-glass store front. Another clawed at him as he swept around the corner to Highland. He managed to shake free.
The street ahead of him was clear. Now his superior leg-power would count heavily in his favor. Two miles. Could he make it back before others cut him off?
Running, re-loading, firing. Sweat soaking his shirt, rivering down his face, stinging his eyes. A mile covered.
Half way to the drains. They had fallen back.

But more of them were coming, drawn by the rifle shots, pouring in from side streets, stores and houses.

His heart jarred in his body, his breath was ragged. How many of them around him? A hundred? Two hundred?

More coming. God!

He bit down on his lower lip until the salt taste of blood was on his tongue. You can't make it, a voice inside him shouted, they'll have you in another block and you know it!

He fitted the rifle to his shoulder, adjusted his aim, and fired. The long rolling crack of the big weapon filled the night. Again and again he fired, the butt jerking into the flesh of his shoulder, the smell of powder in his nostrils.

It was no use. Too many of them.

Lewis Stillman knew that he was going to die.

The rifle was empty at last, the final bullet had been fired. He had no place to run because they were all around him, in a slowly closing circle.

He looked at the ring of small cruel faces and he thought: The aliens did their job perfectly; they stopped Earth before she could reach the age of the rocket, before she could threaten planets beyond her own moon. What an immensely clever plan it had been! To destroy every human being on Earth above the age of six--and then to leave as quickly as they had come, allowing our civilization to continue on a primitive level, knowing that Earth's back had been broken, that her survivors would revert to savagery as they grew into adulthood.

Lewis Stillman dropped the empty rifle at his feet and threw out his hands. "Listen," he pleaded, "I'm really one of you. You'll all be like me soon. Please, listen to me."

But the circle tightened relentlessly around Lewis Stillman. He was screaming when the children closed in.

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THE NATIVE SOIL
by Alan E. Nourse

Before the first ship from Earth made a landing on Venus, there was much speculation about what might be found beneath the cloud layers obscuring that planet's surface from the eyes of all observers.

One school of thought maintained that the surface of Venus was a jungle, rank with hot-house moisture, crawling with writhing fauna and man-eating flowers. Another group contended hotly that Venus was an arid desert of wind-carved sandstone, dry and cruel, whipping dust into clouds that sunlight could never penetrate. Others prognosticated an ocean planet with little or no solid ground at all, populated by enormous serpents waiting to greet the first Earthlings with jaws agape.

But nobody knew, of course. Venus was the planet of mystery.

When the first Earth ship finally landed there, all they found was a great quantity of mud.

There was enough mud on Venus to go all the way around twice, with some left over. It was warm, wet, soggy mud--clinging and tenacious. In some places it was gray, and in other places it was black. Elsewhere it was found to be varying shades of brown, yellow, green, blue and purple. But just the same, it was still mud. The sparse Venusian vegetation grew up out of it; the small Venusian natives lived down in it; the steam rose from it and the rain fell on it, and that, it seemed, was that. The planet of mystery was no longer mysterious. It was just messy. People didn't talk about it any more.

But technologists of the Piper Pharmaceuticals, Inc., R&D squad found a certain charm in the Venusian mud.

They began sending cautious and very secret reports back to the Home Office when they discovered just what, exactly was growing in that Venusian mud besides Venusian natives. The Home Office promptly bought up full exploratory and mining rights to the planet for a price that was a brazen steal, and then in high excitement began pouring millions of dollars into ships and machines bound for the muddy planet. The Board of Directors met hoots of derision with secret smiles as they rubbed their hands together softly. Special crews of psychologists were dispatched to Venus to contact the natives; they returned, exuberant, with test-results that proved the natives were friendly, intelligent, co-operative and resourceful, and the Board of Directors rubbed their hands more eagerly together, and poured more money into the Piper Venusian Installation.

It took money to make money, they thought. Let the fools laugh. They wouldn't be laughing long. After all, Piper Pharmaceuticals, Inc., could recognize a gold mine when they saw one.

They thought.

* * * * *
Robert Kielland, special investigator and trouble shooter for Piper Pharmaceuticals, Inc., made an abrupt and intimate acquaintance with the fabulous Venusian mud when the landing craft brought him down on that soggy planet. He had transferred from the great bubble-shaped orbital transport ship to the sleek landing craft an hour before, bored and impatient with the whole proposition. He had no desire whatever to go to Venus. He didn't like mud, and he didn't like frontier projects. There had been nothing in his contract with Piper demanding that he travel to other planets in pursuit of his duties, and he had balked at the assignment. He had even balked at the staggering bonus check they offered him to help him get used to the idea.

It was not until they had convinced him that only his own superior judgment, his razor-sharp mind and his extraordinarily shrewd powers of observation and insight could possibly pull Piper Pharmaceuticals, Inc., out of the mudhole they'd gotten themselves into, that he had reluctantly agreed to go. He wouldn't like a moment of it, but he'd go.

Things weren't going right on Venus, it seemed. The trouble was that millions were going in and nothing was coming out. The early promise of high production figures had faltered, sagged, dwindled and vanished. Venus was getting to be an expensive project to have around, and nobody seemed to know just why.

Now the pilot dipped the landing craft in and out of the cloud blanket, braking the ship, falling closer and closer to the surface as Kielland watched gloomily from the after port. The lurching billows of clouds made him queasy; he opened his Piper samples case and popped a pill into his mouth. Then he gave his nose a squirt or two with his Piper Rhino-Vac nebulizer, just for good measure. Finally, far below them, the featureless gray surface skimmed by. A sparse scraggly forest of twisted gray foliage sprang up at them.

The pilot sighted the landing platform, checked with Control Tower, and eased up for the final descent. He was a skillful pilot, with many landings on Venus to his credit. He brought the ship up on its tail and sat it down on the landing platform for a perfect three-pointer as the jets rumbled to silence.

Then, abruptly, they sank--landing craft, platform and all.

The pilot buzzed Control Tower frantically as Kielland fought down panic. Sorry, said Control Tower. Something must have gone wrong. They'd have them out in a jiffy. Good lord, no, don't blast out again, there were a thousand natives in the vicinity. Just be patient, everything would be all right.

They waited. Presently there were thumps and bangs as grapplers clanged on the surface of the craft. Mud gurgled around them as they were hauled up and out with the sound of a giant sipping soup. A mud-encrusted hatchway flew open, and Kielland stepped down on a flimsy-looking platform below. Four small rodent-like creatures were attached to it by ropes; they heaved with a will and began paddling through the soupy mud dragging the platform and Kielland toward a row of low wooden buildings near some stunted trees.

As the creatures paused to puff and pant, the back half of the platform kept sinking into the mud. When they finally reached comparatively solid ground, Kielland was mud up to the hips, and mad enough to blast off without benefit of landing craft.

He surveyed the Piper Venusian Installation, hardly believing what he saw. He had heard the glowing descriptions of the Board of Directors. He had seen the architect's projections of fine modern buildings resting on water-proof buoys, neat boating channels to the mine sites, fine orange-painted dredge equipment (including the new Piper Axis-Traction Dredges that had been developed especially for the operation). It had sounded, in short, just the way a Piper Installation ought to sound.

But there was nothing here that resembled that. Kielland could see a group of little wooden shacks that looked as though they were ready at a moment's notice to sink with a gurgle into the mud. Off to the right across a mud flat one of the dredges apparently had done just that: a swarm of men and natives were hard at work dragging it up again. Control Tower was to the left, balanced precariously at a slight tilt in a sea of mud.

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Inside the Administration shack Kielland found a weary-looking man behind a desk, scribbling furiously at a pile of reports. Everything in the shack was splattered with mud. The crude desk and furniture was smeared; the papers had black speckles all over them. Even the man's face was splattered, his clothing encrusted with gobs of still-damp mud. In a corner a young man was industriously scrubbing down the wall with a large brush.

The man wiped mud off Kielland and jumped up with a gleam of hope in his tired eyes. "Ah! Wonderful!" he cried. "Great to see you, old man. You'll find all the papers and reports in order here, everything ready for you--" He brushed the papers away from him with a gesture of finality. "Louie, get the landing craft pilot and don't let him out of your sight. Tell him I'll be ready in twenty minutes--"

"Hold it," said Kielland. "Aren't you Simpson?"

The man wiped mud off his cheeks and spat. He was tall and graying. "That's right."
"Where do you think you're going?"
"Aren't you relieving me?"
"I am not!"
"Oh, my." The man crumbled behind the desk, as though his legs had just given way. "I don't understand it.
They told me--"
"I don't care what they told you," said Kielland shortly. "I'm a trouble shooter, not an administrator. When
production figures begin to drop, I find out why. The production figures from this place have never gotten high
enough to drop."
"This is supposed to be news to me?" said Simpson.
"So you've got troubles."
"Friend, you're right about that."
"Well, we'll straighten them out," Kielland said smoothly. "But first I want to see the foreman who put that
wretched landing platform together."
Simpson's eyes became wary. "Uh--you don't really want to see him?"
"Yes, I think I do. When there's such obvious evidence of incompetence, the time to correct it is now."
"Well--maybe we can go outside and see him."
"We'll see him right here." Kielland sank down on the bench near the wall. A tiny headache was developing; he
found a capsule in his samples case and popped it in his mouth.
Simpson looked sad and nodded to the orderly who had stopped scrubbing down the wall. "Louie, you heard
the man."
"But boss--"
Simpson scowled. Louie went to the door and whistled. Presently there was a splashing sound and a short, gray
creature padded in. His hind feet were four-toed webbed paddles; his legs were long and powerful like a kangaroo's.
He was covered with thick gray fur which dripped with thick black mud. He squeaked at Simpson, wriggling his
nose. Simpson squeaked back sharply.
Suddenly the creature began shaking his head in a slow, rhythmic undulation. With a cry Simpson dropped
behind the desk. The orderly fell flat on the floor, covering his face with his arm. Kielland's eyes widened; then he
was sitting in a deluge of mud as the little Venusian shook himself until his fur stood straight out in all directions.
Simpson stood up again with a roar. "I've told them a thousand times if I've told them once--" He shook his
head helplessly as Kielland wiped mud out of his eyes. "This is the one you wanted to see."
Kielland sputtered. "Can it talk to you?"
"It doesn't talk, it squeaks."
"Then ask it to explain why the platform it built didn't hold the landing craft."
Simpson began whistling and squeaking at length to the little creature. Its shaggy tail crept between its legs and
it hung its head like a scolded puppy.
"He says he didn't know a landing craft was supposed to land on the platform," Simpson reported finally. "He's
sorry, he says."
"But hasn't he seen a landing craft before?"
Squeak, squeak. "Oh, yes."
"Wasn't he told what the platform was being made for?"
Squeak, squeak. "Of course."
"Then why didn't the platform stand up?"
Simpson sighed. "Maybe he forgot what it was supposed to be used for in the course of building it. Maybe he
never really did understand in the first place. I can't get questions like that across to him with this whistling, and I
doubt that you'll ever find out which it was."
"Then fire him," said Kielland. "We'll find some other--"
"Oh, no! I mean, let's not be hasty," said Simpson. "I'd hate to have to fire this one--for a while yet, at any rate."
"Why?"
"Because we've finally gotten across to him--at least I think we have--just how to take down a dredge tube."
simpson's voice was almost tearful. "It's taken us months to teach him. If we fire him, we'll have to start all over
again with another one."
Kielland stared at the Venusian, and then at Simpson. "So," he said finally, "I see."
"No, you don't," Simpson said with conviction. "You don't even begin to see yet. You have to fight it for a few
months before you really see." He waved the Venusian out the door and turned to Kielland with burden of ten
months' frustration in his voice. "They're stupid," he said slowly. "They're so incredibly stupid I could go
screaming into the swamp every time I see one of them coming. Their stupidity is positively abysmal."
"Then why use them?" Kielland spluttered.
"Because if we ever hope to mine anything in this miserable mudhole, we've got to use them to do it. There just isn't any other way."

With Simpson leading, they donned waist-high waders with wide, flat silicone-coated pans strapped to the feet and started out to inspect the installation.

A crowd of a dozen or more Venusian natives swarmed happily around them like a pack of hounds. They were in and out of the steaming mud, circling and splashing, squeaking: and shaking. They seemed to be having a real field day.

"Of course," Simpson was saying, "since Number Four dredge sank last week there isn't a whale of a lot of Installation left for you to inspect. But you can see what there is, if you want."

"You mean Number Four dredge is the only one you've got to use?" Kielland asked peevishly. "According to my records you have five Axis-Traction dredges, plus a dozen or more of the old kind."

"Ah!" said Simpson. "Well, Number One had its vacuum chamber corroded out a week after we started using dredging. Ran into a vein of stuff with 15 per cent acid content, and it got chewed up something fierce. Number Two sank without a trace--over there in the swamp someplace." He pointed across the black mud flats to a patch of sickly vegetation. "The Mud-pups know where it is, they think, and I suppose they could go drag it up for us if we dared take the time, but it would lose us a month, and you know the production schedule we've been trying to meet."

"So what about Numbers Three and Five?"

"Oh, we still have them. They won't work without a major overhaul, though."

"Overhaul! They're brand new."

"They were. The Mud-pups didn't understand how to sluice them down properly after operations. When this gunk gets out into the air it hardens like cement. You ever see a cement mixer that hasn't been cleaned out after use for a few dozen times? That's Numbers Three and Five."

"What about the old style models?"

"Half of them are out of commission, and the other half are holding the islands still."

"Islands?"

"Those chunks of semisolid ground we have Administration built on. The chunk that keeps Control Tower in one place."

"Well, what are they going to do--walk away?"

"That's just about right. The first week we were in operation we kept wondering why we had to travel farther every day to get to the dredges. Then we realized that solid ground on Venus isn't solid ground at all. It's just big chunks of denser stuff that floats on top of the mud like dumplings in a stew. But that was nothing compared to the other things--"

They had reached the vicinity of the salvage operation on Number Five dredge. To Kielland it looked like a huge cylinder-type vacuum cleaner with a number of flexible hoses sprouting from the top. The whole machine was three-quarters submerged in clinging mud. Off to the right a derrick floated hub-deep in slime; grapplers from it were clinging to the dredge and the derrick was heaving and splashing like a trapped hippopotamus. All about the submerged machine were Mud-pups, working like strange little beavers as the man supervising the operation wiped mud from his face and carried on a running line of shouts, curses, whistles and squeaks.

Suddenly one of the Mud-pups saw the newcomers. He let out a squeal, dropped his line in the mud and bounced up to the surface, dancing like a dervish on his broad webbed feet as he stared in unabashed curiosity. A dozen more followed his lead, squirming up and staring, shaking gobs of mud from their fur.

"No, no!" the man supervising the operation screamed. "Pull, you idiots. Come back here! Watch out--"

The derrick wobbled and let out a whine as steel cable sizzled out. Confused, the Mud-pups tore themselves away from the newcomers and turned back to their lines, but it was too late. Number Five dredge trembled, with a wet sucking sound, and settled back into the mud, blub--blub--blub.

The supervisor crawled down from his platform and sloshed across to where Simpson and Kielland were standing. He looked like a man who had suffered the torment of the damned for twenty minutes too long. "No more!" he screamed in Simpson's face. "That's all. I'm through. I'll pick up my pay any time you get it ready, and I'll finish off my contract at home, but I'm through here. One solid week I work to teach these idiots what I want them to do, and you have to come along at the one moment all week when I really need their concentration." He glared, his face purple. "Concentration! I should hope for so much! You got to have a brain to have concentration--"

"Barton, this is Kielland. He's here from the Home Office, to solve all our problems."

"You mean he brought us an evacuation ship?"

"No, he's going to tell us how to make this Installation pay. Right, Kielland?" Simpson's grin was something to see.
Kielland scowled. "What are you going to do with the dredge--just leave it there?" he asked angrily.

"No--I'm going to dig it out, again," said Barton, "after we take another week off to drum into those quarterbrained mud-hens just what it is we want them to do--again--and then persuade them to do it--again--and then hope against hope that nothing happens along to distract them--again. Any suggestions?"

Simpson shook his head. "Take a rest, Barton. Things will look brighter in the morning."

"Nothing ever looks brighter in the morning," said Barton, and he sloshed angrily off toward the Administration island.

"You see?" said Simpson. "Or do you want to look around some more?"

* * * * *

Back in Administration shack, Kielland sprayed his throat with Piper Fortified Bio-Static and took two tetracycline capsules from his samples case as he stared gloomily down at the little gob of blue-gray mud on the desk before him.

The Venusian bonanza, the sole object of the multi-million-dollar Piper Venusian Installation, didn't look like much. It ran in veins deep beneath the surface. The R&D men had struck it quite by accident in the first place, sampled it along with a dozen other kinds of Venusian mud--and found they had their hands on the richest 'mycin-bearing bacterial growth since the days of the New Jersey mud flats.

The value of the stuff was incalculable. Twenty-first century Earth had not realized the degree to which it depended upon its effective antibiotic products for maintenance of its health until the mutating immune bacterial strains began to outpace the development of new antibacterials. Early penicillin killed 96 per cent of all organisms in its spectrum--at first--but time and natural selection undid its work in three generations. Even the broad-spectrum drugs were losing their effectiveness to a dangerous degree within decades of their introduction. And the new drugs grown from Earth-born bacteria, or synthesized in the laboratories, were too few and too weak to meet the burgeoning demands of humanity--

Until Venus. The bacteria indigenous to that planet were alien to Earth--every attempt to transplant them had failed--but they grew with abandon in the warm mud currents of Venus. Not all mud was of value: only the singular blue-gray stuff that lay before Kielland on the desk could produce the 'mycin-like tetracycline derivative that was more powerful than the best of Earth-grown wide spectrum antibiotics, with few if any of the unfortunate side-effects of the Earth products.

The problem seemed simple: find the mud in sufficient quantities for mining, dredge it up, and transport it back to Earth to extract the drug. It was the first two steps of the operation that depended so heavily on the mud-acclimated natives of Venus for success. They were as much at home in the mud as they were in the dank, humid air above. They could distinguish one type of mud from another deep beneath the surface, and could carry a dredge-tube down to a lode of the blue-gray muck with the unfailing accuracy of a homing pigeon.

If they could only be made to understand just what they were expected to do. And that was where production ground down to a slow walk.

The next few days were a nightmare of frustration for Kielland as he observed with mounting horror the standard operating procedure of the Installation.

Men and Mud-pups went to work once again to drag Number Five dredge out of the mud. It took five days of explaining, repeating, coaxing and threatening to do it, but finally up it came--with mud caked and hardened in its insides until it could never be used again.

So they ferried Number Six down piecemeal from the special orbital transport ship that had brought it. Only three landing craft sank during the process, and within two weeks Simpson and Barton set bravely off with their dull-witted cohorts to tackle the swamp with a spanking new piece of equipment. At last the delays were over--

Of course, it took another week to get the actual dredging started. The Mud-pups who had been taught the excavation procedure previously had either disappeared into the swamp or forgotten everything they'd ever been taught. Simpson had expected it, but it was enough to keep Kielland sleepless for three nights and drive his blood pressure to suicidal levels. At length, the blue-gray mud began billowing out of the dredge onto the platforms built to receive it, and the transport ship was notified to stand by for loading. But by the time the ferry had landed, the platform with the load had somehow drifted free of the island and required a week-long expedition into the hinterland to track it down. On the trip back they met a rainstorm that dissolved the blue-gray stuff into soup which ran out between the slats of the platform, and back into the mud again.

They did get the platform back, at any rate.

Meanwhile, the dredge began sucking up green stuff that smelled of sewage instead of the blue-gray clay they sought--so the natives dove mud-ward to explore the direction of the vein. One of them got caught in the suction tube, causing a three-day delay while engineers dismantled the dredge to get him out. In re-assembling, two of the dredge tubes got interlocked somehow, and the dredge burned out three generators trying to suck itself through
itself, so to speak. That took another week to fix.

Kielland buried himself in the Administration shack, digging through the records, when the reign of confusion outside became too much to bear. He sent for Tarnier, the Installation physician, biologist, and erstwhile Venusian psychologist. Dr. Tarnier looked like the breathing soul of failure; Kielland had to steel himself to the wave of pity that swept through him at the sight of the man. "You're the one who tested these imbeciles originally?" he demanded.

Dr. Tarnier nodded. His face was seamed, his eyes lustreless. "I tested 'em. God help me, I tested 'em."
"How?"
"Standard for Earthmen, I presume you mean."
"So what else? Piper didn't want to know if they were Einsteins or not. All they wanted was a passable level of intelligence. Give them natives with brains and they might have to pay them something. They thought they were getting a bargain."
"Some bargain."
"Yeah."
"Only your tests say they're intelligent. As intelligent, say, as a low-normal human being without benefit of any schooling or education. Right?"
"That's right," the doctor said wearily, as though he had been through this mill again and again. "Schooling and education don't enter into it at all, of course. All we measured was potential. But the results said they had it."
"Then how do you explain the mess we've got out there?"
"The tests were wrong. Or else they weren't applicable even on a basic level. Or something. I don't know. I don't even care much any more."
"Well I care, plenty. Do you realize how much those creatures are costing us? If we ever do get the finished product on the market, it'll cost too much for anybody to buy."

Dr. Tarnier spread his hands. "Don't blame me. Blame them."

And then this so-called biological survey of yours," Kielland continued, warming to his subject. "From a scientific man, it's a prize. Anatomical description: limited because of absence of autopsy specimens. Apparently have endoskeleton, but organization of the internal organs remains obscure. Thought to be mammalianoid--there's a fence-sitter for you--but can't be certain of this because no young have been observed, nor any females in gestation. Extremely gregarious, curious, playful, irresponsible, etc., etc., etc. Habitat under natural conditions: uncertain. Diet: uncertain. Social organization: uncertain." Kielland threw down the paper with a snort. "In short, the only thing we're certain of is that they're here. Very helpful. Especially when every dime we have in this project depends on our teaching them how to count to three without help."

Dr. Tarnier spread his hands again. "Mr. Kielland, I'm a mere mortal. In order to measure something, it has to stay the same long enough to get it measured. In order to describe something, it has to hold still long enough to be observed. In order to form a logical opinion of a creature's mental capacity, it has to demonstrate some perceptible mental capacity to start with. You can't get very far studying a creature's habitat and social structure when most of its habitating goes on under twenty feet of mud."
"How about the language?"
"We get by with squeaks and whistles and sign language. A sort of pidgin-Venusian. They use a very complex system among themselves." The doctor paused, uncertainly. "Anyway, it's hard to get too tough with the Pups," he burst out finally. "They really seem to try hard--when they can just manage to keep their minds to it."
"Just stupid, carefree, happy-go-lucky kids, eh?"

Dr. Tarnier shrugged.
"Go away," said Kielland in disgust, and turned back to the reports with a sour taste in his mouth. Later he called the Installation Comptroller. "What do you pay Mud-pups for their work?" he wanted to know.
"Nothing," said the Comptroller.
"Nothing!"
"We have nothing they can use. What would you give them--United Nations coin? They'd just try to eat it."
"How about something they can eat, then?"
"Everything we feed them they throw right back up. Planetary incompatibility."
"But there must be something you can use for wages," Kielland protested. "Something they want, something they'll work hard for."
"Well, they liked tobacco and pipes all right--but it interfered with their oxygen storage so they couldn't dive. That ruled out tobacco and pipes. They liked Turkish towels, too, but they spent all their time parading up and down.
in them and slaying the ladies and wouldn't work at all. That ruled out Turkish towels. They don't seem to care too much whether they're paid or not, though—as long as we're decent to them. They seem to like us, in a stupid sort of way."

"Just loving, affectionate, happy-go-lucky kids. I know. Go away." Kielland growled and turned back to the reports ... except that there weren't any more reports that he hadn't read a dozen times or more. Nothing that made sense, nothing that offered a lead. Millions of Piper dollars sunk into this project, and every one of them sitting there blinking at him expectantly.

For the first time he wondered if there really was any solution to the problem. Stumbling blocks had been met and removed before—that was Kielland's job, and he knew how to do it. But stupidity could be a stumbling block that was all but insurmountable.

Yet he couldn't throw off the nagging conviction that something more subtle than stupidity was involved....


Kielland stared at him. "Again?"
Simpson gritted his teeth. "Again."
"Sunk?"
"Blub," said Simpson. "Blub, blub, blub."

Slowly, Kielland stood up, glaring first at Simpson, then at the little muddy creatures that were attempting to hide behind his waders, looking so forlorn and chastised and woebegone. "All right," Kielland said, after a pregnant pause. "That's all. You won't need to relay that order to the ship. Forget about Number Seven dredge. Just get your files in order and get a landing craft down here for me. The sooner the better."

Simpson's face lit up in pathetic eagerness. "You mean we're going to leave?"
"That's what I mean."
"The company's not going to like it--"

"The company ought to welcome us home with open arms," Kielland snarled. "They should shower us with kisses. They should do somersaults for joy that I'm not going to let them sink another half billion into the mud out here. They took a gamble and got cleaned, that's all. They'd be as stupid as your pals here if they kept coming back for more." He pulled on his waders, brushing penitent Mud-pups aside as he started for the door. "Send the natives back to their burrows or whatever they live in and get ready to close down. I've got to figure out some way to make a report to the Board that won't get us all fired."

He slammed out the door and started across to his quarters, waders going splat-splat in the mud. Half a dozen Mud-pups were following him. They seemed extraordinarily exuberant as they went diving and splashing in the mud. Kielland turned and roared at them, shaking his fist. They stopped short, then slunk off with their tails between their legs.

But even at that, their squeaking sounded strangely like laughter to Kielland....

In his quarters the light was so dim that he almost had his waders off before he saw the upheaval. The little room was splattered from top to bottom with mud. His bunk was coated with slime; the walls dripped blue-gray goo. Across the room his wardrobe doors hung open as three muddy creatures rooted industriously in the leather case on the floor.

Kielland let out a howl and threw himself across the room. His samples case! The Mud-pups scattered, squealing. Their hands were filled with capsules, and their muzzles were dripping with white powder. Two went between Kielland's legs and through the door. The third dove for the window with Kielland after him. The company man's hand closed on a slippery tail, and he fell headlong across the muddy bed as the culprit literally slipped through his fingers.

He sat up, wiping mud from his hair and surveying the damage. Bottles and boxes of medicaments were scattered all over the floor of the wardrobe, covered with mud but unopened. Only one large box had been torn apart, its contents ravaged.

Kielland stared at it as things began clicking into place in his mind. He walked to the door, stared out across the steaming gloomy mud flats toward the lighted windows of the Administration shack. Sometimes, he mused, a man can get so close to something that he can't see the obvious. He stared at the samples case again. Sometimes stupidity works both ways—and sometimes what looks like stupidity may really be something far more deadly.

He licked his lips and flipped the telephone-talker switch. After a misconnection or two he got Control Tower. Control Tower said yes, they had a small exploratory scooter on hand. Yes, it could be controlled on a beam and fitted with cameras. But of course it was special equipment, emergency use only--
He cut them off and buzzed Simpson excitedly. "Cancel all I said--about leaving. I mean. Change of plan. Something's come up. No, don't order anything--but get one of those natives that can understand your whistling and give him the word."

Simpson bellowed over the wire. "What word? What do you think you're doing?"

"I may just be saving our skins--we won't know for a while. But however you manage it, tell them we're definitely not leaving Venus. Tell them they're all fired--we don't want them around any more. The Installation is off limits to them from here on in. And tell them we've devised a way to mine the lode without them--got that? Tell them the equipment will be arriving as soon as we can bring it down from the transport."

"Oh, now look--"

"You want me to repeat it?"

Simpson sighed. "All right. Fine. I'll tell them. Then what?"

"Then just don't bother me for a while. I'm going to be busy. Watching TV."

An hour later Kielland was in Control Tower, watching the pale screen as the little remote-controlled explorer circled the installation. Three TV cameras were in operation as he settled down behind the screen. He told Sparks what he wanted to do, and the ship whizzed off in the direction the Mud-pup raiders had taken.

At first, there was nothing but dreary mud flats sliding past the cameras' watchful eyes. Then they picked up a flicker of movement, and the ship circled in lower for a better view. It was a group of natives--a large group. There must have been fifty of them working busily in the mud, five miles away from the Piper Installation. They didn't look so carefree and happy-go-lucky now. They looked very much like desperately busy Mud-pups with a job on their hands, and they were so absorbed they didn't even see the small craft circling above them.

They worked in teams. Some were diving with small containers; some were handling lines attached to the containers; still others were carrying and dumping. They came up full, went down empty, came up full. The produce was heaped in a growing pile on a small semisolid island with a few scraggly trees on it. As they worked the pile grew and grew.

It took only a moment for Kielland to tell what they were doing. The color of the stuff was unmistakable. They were mining piles of blue-gray mud, just as fast as they could mine it.

With a gleam of satisfaction in his eye, Kielland snapped off the screen and nodded at Sparks to bring the cameras back. Then he rang Simpson again.

"Did you tell them?"

Simpson's voice was uneasy. "Yeah--yeah, I told them. They left in a hurry. Quite a hurry."

"Yes, I imagine they did. Where are your men now?"

"Out working on Number Six, trying to get it up."

"Better get them together and pack them over to Control Tower, fast," said Kielland. "I mean everybody. Every man in the Installation. We may have this thing just about tied up, if we can get out of here soon enough--"

Kielland's chair gave a sudden lurch and sailed across the room, smashing into the wall. With a yelp he tried to struggle up the sloping floor; it reared and heaved over the other way, throwing Kielland and Sparks to the other wall amid a heap of instruments. Through the windows they could see the gray mud flats careening wildly below them. It took only an instant to realize what was happening. Kielland shouted, "Let's get out of here!" and headed down the stairs, clinging to the railing for dear life.

Control Tower was sinking in the mud. They had moved faster than he had anticipated, Kielland thought, and snarled at himself all the way down to the landing platform below. He had hoped at least to have time to parley, to stop and discuss the why and wherefores of the situation with the natives. Now it was abundantly clear that any why and wherefores that were likely to be discussed would be discussed later.

And very possibly under twenty feet of mud--

A stream of men were floundering out of Administration shack, plowing through the mud with waders only half strapped on as the line of low buildings began shaking and sinking into the morass. From the direction of Number Six dredge another crew was heading for the Tower. But the Tower was rapidly growing shorter as the buoys that sustained it broke loose with ear-shattering crashes.

Kielland caught Sparks by the shoulder, shouting to be heard above the racket. "The transport--did you get it?"

"I--I think so."

"They're sending us a ferry?"

"It should be on its way."

Simpson sloshed up, his face heavy with dismay. "The dredges! They've cut loose the dredges."

"Bother the dredges. Get your men collected and into the shelters. We'll have a ship here any minute."

"But what's happening?"

"We're leaving--if we can make it before these carefree, happy-go-lucky kids here sink us in the mud, dredges,
Control Tower and all."

Out of the gloom above there was a roar and a streak of murky yellow as the landing craft eased down through the haze. Only the top of Control Tower was out of the mud now. The Administration shack gave a lurch, sagging, as a dozen indistinct gray forms pulled and tugged at the supporting structure beneath it. Already a circle of natives was converging on the Earthmen as they gathered near the landing platform shelters.

"They're cutting loose the landing platform!" somebody wailed. One of the lines broke with a resounding snap, and the platform lurched. Then a dozen men dived through the mud to pull away the slippery, writhing natives as they worked to cut through the remaining guys. Moments later the landing craft was directly overhead and men and natives alike scattered as she sank down.

The platform splintered and jolted under her weight, began skidding, then held firm to the two guy ropes remaining. A horde of gray creatures hurled themselves on those lines as a hatchway opened above and a ladder dropped down. The men scurried up the ropes just as the plastic dome of the Control Tower sank with a gurgle.

Kielland and Simpson paused at the bottom of the ladder, blinking at the scene of devastation around them.

"Stupid, you say," said Kielland heavily. "Better get up there, or we'll go where Control Tower went."
"But--everything--gone!"
"Wrong again. Everything saved." Kielland urged the administrator up the ladder and sighed with relief as the hatch clanged shut. The jets bloomed and sprayed boiling mud far and wide as the landing craft lifted soggily out of the mire and roared for the clouds above.

Kielland wiped sweat from his forehead and sank back on his cot with a shudder. "We should be so stupid," he said.

"I must admit," he said later to a weary and mystified Simpson, "that I didn't expect them to move so fast. But when you've decided in your mind that somebody's really pretty stupid, it's hard to adjust to the idea that maybe he isn't, all of a sudden. We should have been much more suspicious of Dr. Tarnier's tests. It's true they weren't designed for Venusians, but they were designed to assess intelligence, and intelligence isn't a quality that's influenced by environment or species. It's either there or it isn't, and the good Doctor told us unequivocally that it was there."

"But their behavior."

"Even that should have tipped us off. There is a very fine line dividing incredible stupidity and incredible stubbornness. It's often a tough differential to make. I didn't spot it until I found them wolfing down the tetracycline capsules in my samples case. Then I began to see the implications. Those Mud-pups were stubbornly and tenaciously determined to drive the Piper Venusian Installation off Venus permanently, by fair means or foul. They didn't care how it got off--they just wanted it off."

"But why? We weren't hurting them. There's plenty of mud on Venus."

"Ah--but not so much of the blue-gray stuff we were after, perhaps. Suppose a space ship settled down in a wheatfield in Kansas along about harvest time and started loading wheat into the hold? I suppose the farmer wouldn't mind too much. After all, there's plenty of vegetation on Earth--"

"They're growing the stuff?"

"For all they're worth," said Kielland. "Lord knows what sort of metabolism uses tetracycline for food--but they are growing mud that yields an incredibly rich concentration of antibiotic ... their native food. They grow it, harvest it, live on it. Even the way they shake whenever they come out of the mud is a giveaway--what better way to seed their crop far and wide? We were mining away their staff of life, my friend. You really couldn't blame them for objecting."

"Well, if they think they can drive us off that way, they're going to have to get that brilliant intelligence of theirs into action," Simpson said ominously. "We'll bring enough equipment down there to mine them out of house and home."

"Why?" said Kielland. "After all, they're mining it themselves a lot more efficiently than we could ever do it. And with Piper warehouses back on Earth full of old, useless antibiotics that they can't sell for peanuts? No, I don't think we'll mine anything when a simple trade arrangement will do just as well." He sank back in his cot, staring dreamily through the port as the huge orbital transport loomed large ahead of them. He found his throat spray and dosed himself liberally in preparation for his return to civilization. "Of course, the natives are going to be wondering what kind of idiots they're dealing with to sell them pure refined extract of Venusian beefsteak in return for raw chunks of unrefined native soil. But I think we can afford to just let them wonder for a while."
AS LONG AS YOU WISH
By John O'Keefe

If, somehow, you get trapped in a circular time system ... how long is the circumference of an infinitely retraced circle?

The patient sat stiffly in the leather chair on the other side of the desk. Nervously he pressed a coin into the palm of one hand.

"Just start anywhere," I said, "and tell me all about it."

"As before?" Without waiting for an answer, he continued, the coin clutched tightly in one hand. "I'm Charles J. Fisher, professor of Philosophy at Reiser College."

He looked at me quickly. "Or at least I was until recently." For a second his face was boyish. "Professor of Philosophy, that is."

I smiled and found that I was staring at the coin in his hand. He gave it to me. On one side I read the words: THE STATEMENT ON THE OTHER SIDE OF THIS COIN IS FALSE. The patient watched me with an expressionless face; I turned over the coin. It was engraved with the words: THE STATEMENT ON THE OTHER SIDE OF THIS COIN IS FALSE.

"That's not the problem," he said, "not my problem. I had the coin made when I was an undergraduate. I enjoyed reading one side, turning it over, reading the other side, and so on. A fiendish enjoyment like boys planning where to put the tipped-over outhouse."

I looked at the patient. He was thirty-eight, single, medium build, had an M.A. and Ph.D. from an eastern university. I knew this and more from the folder on my desk.

"Eight months ago," he continued, "I read about the sphere found on Paney Island." He stopped, looking at me questioningly.

"Yes, I know," I said. I opened my desk drawer, took out a clipping from the newspaper, and handed it to him.

"That's it."

I read the clipping before putting it back in the drawer.

Manila, Sept. 24 (INS) Archeologists from University of California have discovered in earth fault of recent quake a sphere two feet in diameter of an unidentifiable material.

Dr. Karl Schwartz, head of the group, said the sphere was returned to the University for study. He declined to answer questions on the cultural origin of the sphere.

"There wasn't any more in the newspapers about it," he said. "I have a friend in California who got me the photographs."

"Later," I said. I wanted to get through the preliminaries first. There would be time later to see the photographs.

* * * * *

"The characters projected by the sphere," he said, "weren't like the characters of any known language."

"As I said," he continued, "I obtained the photographs of the characters. Very strange shapes, totally unlike the characters of Oriental languages, but yet that is the closest way to describe them." He jerked forward in his chair, "Except, of course, ostensively."

I made a mental note of the numbers. I felt they were significant.

"And the reasons for this supposition?" I asked.

"The material ... the material of the sphere. It could only be roughly classified as ferro-plastic. Totally unknown, amazing imperviousness. A synthetic material, hardly the product of a former culture."

"From Mars?" I said, smiling.

"There were all kinds of conjectures, but, of course, the important thing was to see if the projection of characters was a message. The message, if any, would mean more than any conjecture."

"You translated it?"
He polished the coin on his jacket. "You won't dare believe it," he said sharply.

He cleared his throat and stiffened into a more rigid posture. "It wasn't exactly translation. You see, to us none of the characters had designation. They were just characters."

"So it was a problem of decoding?" I asked.

"As it turned out, no. Decoding is dependent on knowledge of language characteristics--characteristics of known languages. Decoding was tried, but without success. No, what we had to find was a key to the language."

"You mean like the Rune Stone?"

"More or less. In principle, we needed a picture of a cow, and a sign of meaning indicating one of the characters."

"For me, there was no possibility of finding similarities between the characters and characters of other languages--that would require tremendous linguistic knowledge and library facilities. Nor could I use a decoding approach--that would require special knowledge of techniques and access to electronic computers and other mechanical aids. No, I had to work on the assumption that the key to the sphere was implicit in the sphere."

"You hoped to find the key to the language in the language itself?"

"Exactly. You know, of course, some languages do have an implicit key? For example hieroglyphics or picture language. The word for cow is a picture of a cow."

He looked at the toes of his shoes. "You won't be able to believe it. It's impossible to believe. I use the word impossible in its logical sense."

"In most languages," he continued, looking up from his shoes, "the sound of some words themselves indicates the meaning of the word. Onomatopoetic words like bowwow, buzz."

"And the key to the unknown language?" I asked. "How did you find it?"

I watched him push the coin against the back of his arm, then lift it to read the backward letters pressed into his skin. He looked up at me and smiled.

"I built models of the characters. Big material ones, exactly proportionate to the ones projected. Then--quite by accident--I viewed one of them through a glass globe the size of the original sphere. What do you think I saw?"

"What?" I noticed he had the boyish look again.

"A distortion of the model. But that's not what's important. The distortions, on study, gave specific visual entities. Like when looking at one of those trick pictures and suddenly seeing the lion in the grass. The lines outlining the lion are there all the time, only the observer has to view them as the outline of a lion. It was the same with the models of the characters, except the shapes that appeared were not of lions or other recognizable things. But they did suggest."

He pressed the coin against his forehead, closed his eyes and appeared to be thinking deeply. "Yes, impossible to believe. No one can believe it."

"In addition to the visual response, the distortions gave me definite feelings. Not mixtures of feelings, but one definite emotional experience."

"How do you mean?"

"One character when viewed through the globe gave me a visual image and, at the same time, a strong feeling of light hilarity."

"I take it then that these distortions seemed to connote meanings, rather than denote them. You might say that their meaning was conveyed through a Gestalt experience on the part of the observer?"

"Yes, each character gave a definite Gestalt. But, the Gestalt was the same for each observer. Or at least for thirty-five observers there was an eighty per cent correlation."

I whistled softly. "And the translation?"

"Doctor, what would you say if I told you the translation was unbelievable; that it couldn't be seriously entertained by any man? What if I said that it would take the sanity of any man who believed it?"

"I would say that it might well be incorrect."

He took some papers from his pocket and laughed excitedly, slumping down in the chair. "This is the complete translation in idiomatic English. I'm going to let you read it, but first I want you to consider a few things."

He hid the papers behind the back of his chair; his face became even more boyish, almost as if he were deciding on where to put the tipped over outhouse.

"Consider first, doctor, that there was a total projection of three hundred and sixty different characters. The same number as the number of degrees in a circle. Consider also that there were eighteen different orderings of the characters, or nineteen counting the alphabetical list. The square root of three hundred and sixty would lie between eighteen and nineteen."

"Yes," I said. I remembered there was something significant about the numbers, but I wasn't at all sure that it
"Consider also," he continued, "that the communication was through the medium of a sphere. Moreover, keep in mind that physics accepts the path of a beam of light as its definition of a straight line. Yet, the path is a curve; if extended sufficiently it would be a circle, the section of a sphere."

"All right," I said. By now the patient was pounding the coin against the sole of one shoe.

"And," he said, "keep in mind that in some sense time can be thought of as another dimension." He suddenly thrust the papers at me and sat back in the chair.

I picked up the translation and began reading. The patient sat stiffly in the leather chair on the other side of the desk. Nervously he pressed a coin into the palm of one hand.

"Just start anywhere," I said, "and tell me all about it."

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THE END

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**Contents**

**THE GOOD NEIGHBORS**  
By Edgar Pangborn

*You can't blame an alien for a little inconvenience--as long as he makes up for it!*

The ship was sighted a few times, briefly and without a good fix. It was spherical, the estimated diameter about twenty-seven miles, and was in an orbit approximately 3400 miles from the surface of the Earth. No one observed the escape from it.

The ship itself occasioned some excitement, but back there at the tattered end of the 20th century, what was one visiting spaceship more or less? Others had appeared before, and gone away discouraged—or just not bothering. 3-dimensional TV was coming out of the experimental stage. Soon anyone could have Dora the Doll or the Grandson of Tarzan smack in his own living-room. Besides, it was a hot summer.

The first knowledge of the escape came when the region of Seattle suffered an eclipse of the sun, which was not an eclipse but a near shadow, which was not a shadow but a thing. The darkness drifted out of the northern Pacific. It generated thunder without lightning and without rain. When it had moved eastward and the hot sun reappeared, wind followed, a moderate gale. The coast was battered by sudden high waves, then hushed in a bewilderment of fog.

Before that appearance, radar had gone crazy for an hour.

The atmosphere buzzed with aircraft. They went up in readiness to shoot, but after the first sighting reports only a few miles offshore, that order was vehemently canceled—someone in charge must have had a grain of sense. The thing was not a plane, rocket or missile. It was an animal.

If you shoot an animal that resembles an inflated gas-bag with wings, and the wingspread happens to be something over four miles tip to tip, and the carcass drops on a city—it's not nice for the city.

The Office of Continental Defense deplored the lack of precedent. But actually none was needed. You just don't drop four miles of dead or dying alien flesh on Seattle or any other part of a swarming homeland. You wait till it flies out over the ocean, if it will—the most commodious ocean in reach.

It, or rather she, didn't go back over the Pacific, perhaps because of the prevailing westerlies. After the Seattle incident she climbed to a great altitude above the Rockies, apparently using an updraft with very little wing-motion. There was no means of calculating her weight, or mass, or buoyancy. Dead or injured, drift might have carried her anywhere within one or two hundred miles. Then she seemed to be following the line of the Platte and the Missouri. By the end of the day she was circling interminably over the huge complex of St. Louis, hopelessly crying.

She had a head, drawn back most of the time into the bloated mass of the body but thrusting forward now and then on a short neck not more than three hundred feet in length. When she did that the blunt turtle-like head could be observed, the gaping, toothless, suffering mouth from which the thunder came, and the soft-shining purple eyes that
searched the ground but found nothing answering her need. The skin-color was mud-brown with some dull iridescence and many peculiar marks resembling weals or blisters. Along the belly some observers saw half a mile of paired protuberances that looked like teats.

She was unquestionably the equivalent of a vertebrate. Two web-footed legs were drawn up close against the cigar-shaped body. The vast, rather narrow, inflated wings could not have been held or moved in flight without a strong internal skeleton and musculature. Theorists later argued that she must have come from a planet with a high proportion of water surface, a planet possibly larger than Earth though of about the same mass and with a similar atmosphere. She could rise in Earth's air. And before each thunderous lament she was seen to breathe.

It was assumed that immense air sacs within her body were inflated or partly inflated when she left the ship, possibly with some gas lighter than nitrogen. Since it was inconceivable that a vertebrate organism could have survived entry into atmosphere from an orbit 3400 miles up, it was necessary to believe that the ship had briefly descended, unobserved and by unknown means, probably on Earth's night-side. Later on the ship did descend as far as atmosphere, for a moment ...

St. Louis was partly evacuated. There is no reliable estimate of the loss of life and property from panic and accident on the jammed roads and rail lines. 1500 dead, 7400 injured is the conservative figure.

After a night and a day she abandoned that area, flying heavily eastward. The droning and swooping gnats of aircraft plainly distrest her. At first she had only tried to avoid them, but now and then during her eastward flight from St. Louis she made short desperate rushes against them, without skill or much sign of intelligence, screaming from a wide-open mouth that could have swallowed a four-engine bomber. Two aircraft were lost over Cincinnati, by collision with each other in trying to get out of her way. Pilots were then ordered to keep a distance of not less than ten miles until such time as she reached the Atlantic--if she did--when she could safely be shot down.

She studied Chicago for a day.

By that time Civil Defense was better prepared. About a million residents had already fled to open country before she came, and the loss of life was proportionately smaller. She moved on. We have no clue to the reason why great cities should have attracted her, though apparently they did. She was hungry perhaps, or seeking help, or merely drawn in animal curiosity by the endless motion of the cities and the strangeness. It has even been suggested that the life forms of her homeland--her masters--resembled humanity. She moved eastward, and religious organizations united to pray that she would come down on one of the lakes where she could safely be destroyed. She didn't.

She approached Pittsburgh, choked and screamed and flew high, and soared in weary circles over Buffalo for a day and a night. Some pilots who had followed the flight from the West Coast claimed that the vast lamentation of her voice was growing fainter and hoarser while she was drifting along the line of the Mohawk Valley. She turned south, following the Hudson at no great height. Sometimes she appeared to be choking, the labored inhalations harsh and prolonged, like a cloud in agony.

When she was over Westchester, headquarters tripled the swarm of interceptors and observation planes. Squadrions from Connecticut and southern New Jersey deployed to form a monstrous funnel, the small end before her, the large end pointing out to open sea. Heavy bombers closed in above, laying a smoke screen at 10,000 feet to discourage her from rising. The ground shook with the drone of jets, and with her crying.

Multitudes had abandoned the metropolitan area. Other multitudes trusted to the subways, to the narrow street canyons and to the strength of concrete and steel. Others climbed to a thousand high places and watched, trusting the laws of chance.

She passed over Manhattan in the evening--between 8:14 and 8:27 P.M., July 16, 1976--at an altitude of about 2000 feet. She swerved away from the aircraft that blanketed Long Island and the Sound, swerved again as the southern group buzzed her instead of giving way. She made no attempt to rise into the sun-crimsoned terror of drifting smoke.

The plan was intelligent. It should have worked, but for one fighter pilot who jumped the gun.

He said later that he himself couldn't understand what happened. It was court-martial testimony, but his reputation had been good. He was Bill Green--William Hammond Green--of New London, Connecticut, flying a one-man jet fighter, well aware of the strictest orders not to attack until the target had moved at least ten miles east of Sandy Hook. He said he certainly had no previous intention to violate orders. It was something that just happened in his mind. A sort of mental sneeze.

His squadron was approaching Rockaway, the flying creature about three miles ahead of him and half a mile down. He was aware of saying out loud to nobody: "Well, she's too big." Then he was darting out of formation, diving on her, giving her one rocket-burst and reeling off to the south at 840 MPH.

He never did locate or rejoin his squadron, but he made it somehow back to his home field. He climbed out of the cockpit, they say, and fell flat on his face.
It seems likely that his shot missed the animal's head and tore through some part of her left wing. She spun to the left, rose perhaps a thousand feet, facing the city, sideslipped, recovered herself and fought for altitude. She could not gain it. In the effort she collided with two of the following planes. One of them smashed into her right side behind the wing, the other flipped end over end across her back, like a swatted dragonfly. It dropped clear and made a mess on Bedloe's Island.

She too was falling, in a long slant, silent now but still living. After the impact her body thrashed desolately on the wreckage between Lexington and Seventh Avenues, her right wing churning, then only trailing, in the East River, her left wing a crumpled slowly deflating mass concealing Times Square, Herald Square and the garment district.

At the close of the struggle her neck extended, her turtle beak grasping the top of Radio City. She was still trying to pull herself up, as the buoyant gasses hissed and bubbled away through the gushing holes in her side. Radio City collapsed with her.

For a long while after the roar of descending rubble and her own roaring had ceased, there was no human noise except a melancholy thunder of the planes.

The Spaceship came early next morning.

A capsule was released, with a parachute timed to open at 40,000 feet and come down quite neatly in Scarsdale. Parachute, capsule and timing device were of good workmanship.

The communication engraved on a plaque of metal (which still defies analysis) was a hasty job, the English slightly odd, with some evidence of an incomplete understanding of the situation. That the visitors were themselves aware of these deficiencies is indicated by the text of the message itself.

Most sadly regret inexcusable escape of livestock. While petting same, one of our children monkied (sp?) with airlock. Will not happen again. Regret also imperfect grasp of language, learned through what you term Television etc. Animal not dangerous, but observe some accidental damage caused, therefore hasten to enclose reimbursement, having taken liberty of studying your highly ingenious methods of exchange. Hope same will be adequate, having estimated deplorable inconvenience to best of ability. Regret exceedingly impossibility of communicating further, as pressure of time and prior obligations forbids. Please accept heartfelt apologies and assurances of continuing esteem.

The reimbursement was in fact properly enclosed with the plaque, and may be seen by the public in the rotunda of the restoration of Radio City. Though technically counterfeit, it looks like perfectly good money, except that Mr. Lincoln is missing one of his wrinkles and the words "FIVE DOLLARS" are upside down.

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THIS ONE PROBLEM
by M. C. Pease

The shortest distance between two points may be the long way around--and a path of dishonor may well turn into the high road to virtue.

Marc Polder, Resident Comptroller of Torran, strolled idly down the dusty littered path that passed for a street. In the half-light of the pint-sized moon overhead the town looked almost romantic. One day, when civilization had at last been brought to these Asteroid bases, memory would make Torran heroic. But now, with the fact before the eyes, it was merely dirty and squalid. Only the scum of the Solar System called it home.

Idly Marc Polder pushed a swinging door aside and entered what passed on Torran for a restaurant. Pushing his way through the tables until he saw his only aide, Female Personnel Manager Lee Treynor, he sat down.

"What's new?" he asked.

"Not a thing." But for a certain softness of voice and curve of unmade-up lips, Lee could have passed for a boy. Her light hair was short, she wore a man's coveralls. She added, "Only the usual murder, arson and brigandage that you don't want to hear about."

"Don't let such trifles get you down," said Marc with a crooked half-smile.

"I'm fed up," the girl said shortly. "I must have been still wet behind the ears when I agreed to come out here two months ago. I thought I was going to help establish a place where decent people could live and work. So far I've just watched my boss swig Venerian swamp beer with the worst elements in town, and do nothing about the lawlessness that runs riot all over the place."
"Look, lady," Marc answered gently, "I certainly admire those lofty sentiments of yours. I admit they are maybe what ought to be. But the way I see it they just don't fit the facts. Out here the Federation space fleet is supposed to be the big stick. Only right now it's off playing mumbly-peg with the Venerians.

"The Big Wheels seem to think there'll be a shooting war in a couple of months. There's only three or four destroyers left in the whole damn Asteroid Belt. And without the big stick behind me I'm not hankering to commit suicide by looking for trouble."

Marc smiled again ruefully. "What I can do I try to do," he added with sudden earnestness. "I figure the most important thing is to protect the Asteroid Development Company so they can buy the nuclear ore the Astrodites bring in. Without that ore the Federation's going to be in a hell of a fix if it actually does come to war. And along with that there's the matter of guarding the stuff the Navy's got stored here." He waved toward the Navy warehouse that could be seen outside the window.

"Listening to and fraternizing with the characters you call the biggest crooks in town," the comptroller went on with a shrug, "I've a chance at getting tipped off in advance to anything that may make trouble for our interests. As long as I ignore their rackets they accept me in their midst, talk freely with me around. And it's a hell of a lot easier to stop something when you know the score beforehand."

The young woman's lips parted as if she seemed about to say something. Then they closed in a thin line. Obviously she was not happy with Marc Polder's explanation. She was too young to be willing to compromise her ideals, no matter how potent the logic of necessity.

She was about to leave the table when the shrill screams of a distant whistle sliced through the noise of the crowd. Voices broke off in mid-sentence and bodies froze into immobility. As the siren's piercing tones faded the restaurant's customers looked at one another in silent terror. Then, as the shock wore off and unanswered questions were beginning to fly, a man suddenly ran in through the revolving doors.

"Raiders!" he gasped. "The listening gear's picked up a signal that's not from any Astrodite or destroyer. Signal Corps figures it's a pirate!"

There was a mad rush for the doors and seconds later the place was empty except for Marc Polder, still sitting calmly at the table drinking his beer, and Lee Treynor who sat watching him.

"What are you going to do?" she finally asked.

"I don't know. What can I do?" Marc said.

"Good heavens!" the girl exploded. "Are you just going to sit there guzzling beer while pirates take over the town?" She stared at him incredulously.

"What do you suggest I do?" the comptroller asked. "We haven't anything to fight with. There's no way we can get help. As far as I can see there's nothing we can do--not yet anyway." He calmly lifted his glass.

"You mean we're just going to sit here?" the girl gaped.

"Sure. The others left to hide their money and valuables. I've got nothing to hide."

"What about that stuff the Navy has cached in their warehouse?" Lee asked. "That new rocket fuel their destroyers use when they need a little extra push. Is that worth hiding?"

"The hyper-degenerate-thorium, you mean? I'd like to hide that somewhere," Marc conceded. "But where do you hide ten tons of stuff in five minutes? Besides, it wouldn't do the raiders any good. Too hot. It'll burn out their jets. They'd go up like an A-bomb two minutes after they threw it on. They know that. Only thing they could do with it is sell it to Venus. Not that that would be bad. Shortage of H.D.T.'s may be the chief reason why there's been no war started yet. But for now there's nothing you and I can do." Calmly he lit a cigarette.

"Of course," he went on, smiling, "we could bum a ride out with some of the company men. No doubt they're all hightailing it away from here in their space-buggies."

"I'm surprised," Lee said with a trace of sarcasm, "that you're not doing just that, leaving me and the other women to the beasts!"

Marc eyed her unblinkingly. "You know as well as I do that most of the females on this asteroid take pirates in their stride. They might even welcome a change of partners. As for you"--he paused--"you stick close to me and keep your pretty mouth shut. I think we'll manage somehow."

In silence they walked back to the comptroller's office.

"Marc," Lee said as they entered, "what about the new radar? Maybe we could get a message out with it, in code or something."

"What?" Marc turned, astonished. "You want to play our only hole-card on an off-chance like that? There aren't more than four or five people here who even know it's been set up on the other side of the asteroid. There's hardly a chance the raiders will find out about it. And you want to blast the news at them!" He looked disgusted.

The girl said stubbornly, "You can't just give up without a fight. And that's our only weapon."

"Look," Marc said grimly, "that's only a second-hand destroyer radar, so it wouldn't carry far. No. I'm not going
to use it on any such harebrained scheme as that. And if you breathe a word about it I'll take you apart." He added with a faint smile, "Not that that wouldn't be a pleasure."

Looking at him she knew he meant the tender joke and the knowledge helped her.

"I think," Marc went on after a moment, "I'd better warn the boys over on the radar project or they might accidentally start it up while the raiders are here." He closed the door as he went into the inner office to make the call.

A moment later he emerged and studied the still angry girl through half-closed eyes. She blushed under his scrutiny, said coldly, "What's the matter? Afraid I'm not attractive enough for our visitors?"

He grinned. "You could do with a mite of padding here and there. But I was thinking the other way, as a matter of fact. It's a pity you don't have a small mustache."

"You don't have to insult me!" Lee cried bitterly. "I'm glad I'm thin!"

"I'm not insulting you," Marc said mildly. "I even wish you were a bit skinnier. It's the plump girls our guests are going to be looking at first. Remember now--you stick right with me and keep your mouth shut, d'you hear?"

"I hear," she said shortly. But he could see the fear she was trying to hide and he knew she was honestly frightened for the first time in her adult life. She said, "What will they--be like?"

"If it's John Mantor, and I suspect it is, they'll be rough," Marc informed her. "He's a tough ex-pilot who got bounced off Space Patrol and turned outlaw. He seems to hold a grudge against the whole human race. If it's one of the others--it may be a lot worse."

"I don't see why outlaws are allowed to exist at all," she said.

Marc sighed, shook his head. "A lot of people have felt that way over a lot of pirates over a lot of eras. But somehow they keep turning up."

A few minutes later the space-scarred pirate ship had made a rocky landing in the middle of the small spaceport and John Mantor, pirate chief, drove up to the comptroller's office in a cloud of dust. He was tall and dirty and thin and tough. "Which one of you is the comptroller?" he demanded, as he faced Marc Polder and Lee Treynor.

"I am," Marc said, not rising from behind the desk.

"Then you're the guy responsible for any trouble here," Mantor said. "So I'm going to tell you how to avoid trouble." His brutally scarred face twisted into a grin.

"There's a lot of loot around here. I'm not going to ask you where it is. My boys can take care of that matter. But there's also the Navy warehouse. Maybe we won't know what some of the stuff in there is for, so you're going to tell us."

Mantor leaned across the desk, his eyes as hard and cold as chips of duratite. "And if you won't, there's going to be trouble and you'll be it--you and your friend here."

Marc sat impassively, meeting the hard-eyed gaze. "That warehouse is government property," he said. "So far, there's only piracy against you. But if you raid that building you're going to be the personal problem of the Navy. If I were you I'd leave it alone."

"You let me worry about that," said Mantor.

"Besides," Marc went on, "I don't see what good the stuff in that warehouse can be to you. There's little of cash value in there. And I doubt if you can use any of the parts on your ship."

"That could be," Mantor replied. "But on the other hand, maybe we can find a market for certain items." He smiled coldly. Watching, Lee knew he referred to Venus. She sat perfectly still, praying for him not to notice her.

Mantor spread his hands on the desk, a look of hatred and ferocity on his face. "What I want to know is--are you or are you not going to cooperate? And I want to know fast."

"Don't get me wrong," Marc said softly. "I'm not telling you what to do or what not to do. But that warehouse is the thing I'm here to protect. And if I were to agree to help you, the Navy would be after me, too. So I've got to say to hell with you."

John Mantor rocked back on his heels, hooking his thumbs in his belt. A slow smile spread over his face. "Okay," he said. "I think I get what you mean. So I guess we got to work you over. And we'll do it where there aren't any outside witnesses."

Marc grinned back at him.

Lee was puzzled. It took her a moment to realize that the grins sealed a contract between the two men. Marc would cooperate if he were beaten up enough first to satisfy a later investigation--but not too severely for his own comfort!

Lee found it difficult to hide her contempt. She stared at her hands, clenched in her lap, and waited for Mantor to leave.

The looting and destruction were well under way an hour later when a couple of Mantor's men joined their chief, who stood with a somewhat bruised Marc Polder and an unharmed but furious Lee Treynor. Between them
they carried a small, obviously heavy box.

"You know what this stuff is, boss?" one of the men asked. "They got a hundred or a hundred-fifty boxes like this in there." He nodded at the Navy warehouse.

They set the box down and Mantor flung back its lid. It was filled with small grey pellets. Mantor picked up a handful and stood fingering them.

"Looks like rocket fuel," he said. "Only I've never seen any this color. And it's too heavy, also." He turned to the comptroller. "You tell me what it is."

Marc shrugged. "I don't know. It's a Navy secret."

Mantor's eyes glinted. Without warning his fist flew out, sent the comptroller sprawling in the dust where he lay stunned. Lee's hands flew to her mouth barely in time to suppress a cry.

After a few moments Marc rolled over slowly and pushed himself painfully to a sitting position. He looked up at Mantor who stood watching him coldly, his fist flexing.

The comptroller licked his lips and looked around at the several men who stood watching, their faces impassive. "Okay," he said in a none-too-steady voice. "I'll tell you. You'd find out anyway from the files."

"Cut the alibis and give," Mantor growled.

"Keep your shirt on," Marc's voice indicated he was regaining control of himself. "It's H.D.T.--Hyper-Degenerate-Thorium--the stuff the destroyers use to get extra push."

Mantor roared his glee. "Pack it aboard, boys--all of it! And put it where it will be handy, just in case."

This was it, Lee thought as she stood by, watching--the final bitter pill. Mantor had as much as told them he was working for Venus. And the H.D.T. was all Venus needed to be ready for war--a war that might well blast civilization from the Solar System. Strange that so much should depend upon one man; tragic that the one man was a weakling.

With an effort Lee forced herself to be fair. It might have done no good to lie, she conceded. But anyone with even a normal amount of simple courage would have tried.

It was about two hours later when the siren went off again like a banshee wailing to a low-hanging moon. Men came running from all directions, shouting questions at the tops of their voices.

A midget auto came skidding down the pirate ship's ramp, its driver standing on the accelerator. The car knifed through the swirling crowd, barely missing several people, and skidded to a dusty stop directly in front of Mantor.

"Radar signal!" the driver yelled. "The search receiver picked up a signal that sounds like a destroyer's radar. It suddenly came in strong. Probably sneaked up on us from behind that damn moon. It's coming in fast and braking hard!"

There was a mad scramble as the looters raced for their ship. Heavy-handed horseplay was forgotten. They knew they were helpless against a Navy destroyer. Their only hope lay in a fast getaway. Seconds could easily spell the difference between safety and defeat.

In less than ten minutes the ship's locks were sealed and they fired off. As the flames roared out and the huge ship lifted swiftly it was obvious that they were throwing on all the fuel their jets could take.

Marc Polder had faded back into the crowd at the first sound of the siren. As he stood watching the blastoff Lee joined him, hands in her pockets, looking more than ever like a boy.

"Maybe my idea of asking for help wasn't so far-fetched," she said quietly. "Maybe the patrol might have been here in time. Maybe you wouldn't have had to tell them about the H.D.T."

"Maybe," Marc answered without turning his eyes from the dwindling point of reddish light high in the dark sky.

"And just by way of keeping the record straight," the girl went on in a voice that began to rasp, "you know as well as I do that the files don't list any H.D.T. It's under a code name."

"Maybe," Marc replied in a noncommittal tone.

The point of light in the sky suddenly turned blue. Lee was staring at it too, now. And she knew also what the change of color meant. Mantor had started to use the new fuel!

Suddenly there was a blinding flash. Lee cried out and staggered back, covering her eyes. Marc, who had closed his eyes when the color change came, took hold of the girl's arm.

"I told you what would happen if they used the stuff," he said gently. "It's too hot for their jet chambers. It melts the walls. A lot of gas piles up in the tubes. The pressure pushes the fire back. And when it gets shoved back into the recoil chamber and you lose the protective layers of cold gas there--well, then you've got to look for your ship with an ionization gauge!"

"I told you all that long ago. The trouble is, you're too idealistic, Lee. That's not the same as having ideals. I admire ideals--I might even confess to a few of my own. But you don't stop to figure out just what your ideals are--
exactly what you're fighting for.

"You come to a crisis like this one and you forget about the big goal. All you see is this one problem. And by giving them yes-or-no answers--good or bad, brave or cowardly--to the problem of the moment--you may miss a simple solution to the big one.

"You've got to keep a cool head and never forget for even a moment exactly what it is you want to accomplish." His voice was gentle, and it held no rebuke.

"All right," said Lee unhappily, "you win. You needn't bother to rub in the salt. I was going to chase you through all the inquiry courts for this. Instead, you got a lucky break, so I can't do a thing. You ought to be tarred and feathered through every city of the Federation, but because a destroyer happened to stumble in here at the right time you'll end up a hero." Her voice caught in a sob.

"Oh, the destroyer," Marc replied. "Ah, yes, that was lucky, wasn't it? The only hitch is--there wasn't any destroyer. Probably not one within a million miles!" He laughed as Lee turned surprise-widened eyes toward him.

"What they thought was a destroyer was the radar system on the side of the rock, bouncing a signal off the moon. I gave the radar boys the word just before Mantor dropped in on us. The crew did a damned good job of juggling the power and frequency and all." He grinned. "Remind me to buy them a beer sometime."

He laughed then at the girl's expression as it changed from bitter disillusion to something akin to awe, close to hero-worship.

"And this, by the way," Polder said, "is as good a time as any to tell you that I'd like to see you look like a woman, for a change. How about changing into a dress before we go into town. You know, I've never seen you out of that uniform?"

She hesitated, unsure of herself now. "That will take a little time," she said doubtfully.

He put hands on her slim shoulders, gave her a gentle shove toward her quarters. "We've got time," he told her. "Lots of it. But I've been waiting quite a while."

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LOST IN THE FUTURE
By John Victor Peterson

They had discovered a new planet--but its people did not see them until after they had traveled on.

Albrecht and I went down in a shuttlship, leaving the stellatomic orbited pole-to-pole two thousand miles above Alpha Centauri's second planet. While we took an atmosphere-brushing approach which wouldn't burn off the shuttle's skin, we went as swiftly as we could.

A week before we had completed man's first trip through hyperspace. We were now making the first landing on an inhabited planet of another sun. All the preliminary investigations had been made via electronspectroscopes and electronelescopes from the stellatomic.

We knew that the atmosphere was breathable and were reasonably certain that the peoples of the world into whose atmosphere we were dropping were at peace. We went unarmed, just the two of us; it might not be wise to go in force.

We were silent, and I know that Harry Albrecht was as perplexed as I was over the fact that our all-wave receivers failed to pick up any signs of radio communication whatever. We had assumed that we would pick up signals of some type as soon as we had passed down through the unfamiliar planet's ionosphere.

The scattered arrangement of the towering cities appeared to call for radio communications. The hundreds of atmosphere ships flashing along a system of airways between the cities seemed to indicate the existence of electronic navigational and landing aids. But perhaps the signals were all tightly beamed; we would know when we came lower.

We dropped down into the airway levels, and still our receivers failed to pick up a signal of any sort--not even a whisper of static. And strangely, our radarscopes failed to record even a blip from their atmosphere ships!

"I guess it's our equipment, Harry," I said. "It just doesn't seem to function in this atmosphere. We'll have to put Edwards to work on it when we go back upstairs."

We spotted an airport on the outskirts of a large city. The runways were laid out with the precision of Earth's finest. I put our ship's nose eastward on a runway and took it down fast through a lull in the atmosphere ship traffic.

As we went down I saw tiny buildings spotted on the field which surely housed electronic equipment, but our
receivers remained silent.

I taxied the shuttle up to an unloading ramp before the airport's terminal building and I killed the drive.

"Harry," I said, "if it weren't that their ships are so outlandishly stubby and their buildings so outflung, we might well be on Earth!"

"I agree, Captain. Strange, though, that they're not mobbing us. They couldn't take this delta-winged job for one of their ships!"

It was strange.

I looked up at the observation ramp's occupants--people who except for their bizarre dress might well be of Earth--and saw no curiosity in the eyes that sometimes swept across our position.

"Be that as it may, Harry, we certainly should cause a stir in these pressure suits. Let's go!"

We walked up to a dour-looking individual at a counter at the ramp's end. Clearing my throat, I said rather inanely, "Hello!"--but what does one say to an extrasolarian?

I realized then that my voice seemed thunderous, that the only other sounds came from a distance: the city's noise, the atmosphere ships' engines on the horizon--

* * * * *

The Centaurian ignored us.

I looked at the atmosphere ships in the clear blue sky, at the Centaurians on the ramp who appeared to be conversing--and there was no sound from those planes, no sound from the people!

"It's impossible," Harry said. "The atmosphere's nearly Earth-normal. It should be--well, damn it, it is as sound-conductive; we're talking, aren't we?"

I looked up at the Centaurians again. They were looking excitedly westward. Some turned to companions. Mouths opened and closed to form words we could not hear. Wide eyes lowered, following something I could not see. Sick inside, I turned to Albrecht and read confirmation in his drawn, blanched face.

"Captain," he said, "I suspected that we might find something like this when we first came out of hyperspace and the big sleep. The recorders showed we'd exceeded light-speed in normal space-time just after the transition. Einstein theorized that time would not pass as swiftly to those approaching light-speed. We could safely exceed that speed in hyperspace but should never have done so in normal space-time. Beyond light-speed time must conversely accelerate!

"These people haven't seen us yet. They certainly just observed our landing. As we suspected, they probably do have speech and radio--but we can't pick up either. We're seconds ahead of them in time and we can't pick up from the past sounds of nearby origin or nearby signals radiated at light-speed. They'll see and hear us soon, but we'll never receive an answer from them! Our questions will come to them in their future but we can never pick answers from their past!"

"Let's go, Harry," I said quickly.

"Where?" he asked. "Where can we ever go that will be an improvement over this?" He was resigned.

"Back into space," I said. "Back to circle this system at a near-light-speed. The computers should be able to determine how long and how slow we'll have to fly to cancel this out. If not, we are truly and forever lost!"
Miracles to order was a fine way for the paratimers to get mining concessions--but Nature can sometimes pull counter-miracles. And so can men, for that matter....

Through a haze of incense and altar smoke, Yat-Zar looked down from his golden throne at the end of the dusky, many-pillared temple. Yat-Zar was an idol, of gigantic size and extraordinarily good workmanship; he had three eyes, made of turquoises as big as doorknobs, and six arms. In his three right hands, from top to bottom, he held a sword with a flame-shaped blade, a jeweled object of vaguely phallic appearance, and, by the ears, a rabbit. In his left hands were a bronze torch with burnished copper flames, a big goblet, and a pair of scales with an egg in one pan balanced against a skull in the other. He had a long bifurcate beard made of gold wire, feet like a bird's, and other rather startling anatomical features. His throne was set upon a stone plinth about twenty feet high, into the front of which a doorway opened; behind him was a wooden screen, elaborately gilded and painted.

Directly in front of the idol, Ghullam the high priest knelt on a big blue and gold cushion. He wore a gold-fringed robe of dark blue, and a tall conical gold miter, and a bright blue false beard, forked like the idol's golden one: he was intoning a prayer, and holding up, in both hands, for divine inspection and approval, a long curved knife. Behind him, about thirty feet away, stood a square stone altar, around which four of the lesser priests, in light blue robes with less gold fringe and dark-blue false beards, were busy with the preliminaries to the sacrifice. At considerable distance, about halfway down the length of the temple, some two hundred worshipers--a few substantial citizens in gold-fringed tunics, artisans in tunics without gold fringe, soldiers in mail hauberks and plain steel caps, one officer in ornately gilded armor, a number of peasants in nondescript smocks, and women of all classes--were beginning to prostrate themselves on the stone floor.

Ghullam rose to his feet, bowing deeply to Yat-Zar and holding the knife extended in front of him, and backed away toward the altar. As he did, one of the lesser priests reached into a fringed and embroidered sack and pulled out a live rabbit, a big one, obviously of domestic breed, holding it by the ears while one of his fellows took it by the hind legs. A third priest caught up a silver pitcher, while the fourth fanned the altar fire with a sheet-silver fan. As they began chanting antiphonally, Ghullam turned and quickly whipped the edge of his knife across the rabbit's throat. The priest with the pitcher stepped in to catch the blood, and when the rabbit was bled, it was laid on the fire. Ghullam and his four assistants all shouted together, and the congregation shouted in response.

The high priest waited as long as was decently necessary and then, holding the knife in front of him, stepped around the prayer-cushion and went through the door under the idol into the Holy of Holies. A boy in novice's white robes met him and took the knife, carrying it reverently to a fountain for washing. Eight or ten under-priests, sitting at a long table, rose and bowed, then sat down again and resumed their eating and drinking. At another table, a half-dozen upper priests nodded to him in casual greeting.

Crossing the room, Ghullam went to the Triple Veil in front of the House of Yat-Zar, where only the highest of the priesthood might go, and parted the curtains, passing through, until he came to the great gilded door. Here he fumbled under his robe and produced a small object like a mechanical pencil, inserting the pointed end in a tiny hole in the door and pressing on the other end. The door opened, then swung shut behind him, and as it locked itself, the lights came on within. Ghullam removed his miter and his false beard, tossing them aside on a table, then undid his sash and peeled out of his robe. His regalia discarded, he stood for a moment in loose trousers and a soft white shirt, with a pistol-like weapon in a shoulder holster under his left arm--no longer Ghullam the high priest of Yat-Zar, but now Stranor Sleth, resident agent on this time-line of the Fourth Level Proto-Aryan Sector for the Transtemporal Mining Corporation. Then he opened a door at the other side of the anteroom and went to the antigrav shaft, stepping over the edge and floating downward.

* * * * *

There were temples of Yat-Zar on every time-line of the Proto-Aryan Sector, for the worship of Yat-Zar was ancient among the Hulgun people of that area of paratime, but there were only a few which had such installations as this, and all of them were owned and operated by Transtemporal Mining, which had the fissionable ores franchise for this sector. During the ten elapsed centuries since Transtemporal had begun operations on this sector, the process had become standardized. A few First Level paratimers would transpose to a selected time-line and abduct an upper-priest of Yat-Zar, preferably the high priest of the temple at Yoldav or Zurb. He would be drugged and transposed to the First Level, where he would receive hypnotic indoctrination and, while unconscious, have an operation performed on his ears which would enable him to hear sounds well above the normal audible range. He would be
able to hear the shrill sonar-cries of bats, for instance, and, more important, he would be able to hear voices when
the speaker used a First Level audio-frequency step-up phone. He would also receive a memory-oblitration from
the moment of his abduction, and a set of pseudo-memories of a visit to the Heaven of Yat-Zar, on the other side of
the sky. Then he would be returned to his own time-line and left on a mountain top far from his temple, where an
unknown peasant, leading a donkey, would always find him, return him to the temple, and then vanish inexplicably.

Then the priest would begin hearing voices, usually while serving at the altar. They would warn of future
events, which would always come to pass exactly as foretold. Or they might bring tidings of things happening at a
distance, the news of which would not arrive by normal means for days or even weeks. Before long, the holy man
who had been carried alive to the Heaven of Yat-Zar would acquire a most awesome reputation as a prophet, and
would speedily rise to the very top of the priestly hierarchy.

Then he would receive two commandments from Yat-Zar. The first would ordain that all lower priests must
travel about from temple to temple, never staying longer than a year at any one place. This would insure a steady
influx of newcomers personally unknown to the local upper-priests, and many of them would be First Level
paratimers. Then, there would be a second commandment: A house must be built for Yat-Zar, against the rear wall
of each temple. Its dimensions were minutely stipulated; its walls were to be of stone, without windows, and there
was to be a single door, opening into the Holy of Holies, and before the walls were finished, the door was to be
barred from within. A triple veil of brocaded fabric was to be hung in front of this door. Sometimes such innovations
met with opposition from the more conservative members of the hierarchy: when they did, the principal objector
would be seized with a sudden and violent illness; he would recover if and when he withdrew his objections.

Very shortly after the House of Yat-Zar would be completed, strange noises would be heard from behind the
thick walls. Then, after a while, one of the younger priests would announce that he had been commanded in a vision
to go behind the veil and knock upon the door. Going behind the curtains, he would use his door-activator to let
himself in, and return by paratime-conveyer to the First Level to enjoy a well-earned vacation. When the high priest
would follow him behind the veil, after a few hours, and find that he had vanished, it would be announced as a
miracle. A week later, an even greater miracle would be announced. The young priest would return from behind the
Triple Veil, clad in such raiment as no man had ever seen, and bearing in his hands a strange box. He would
announce that Yat-Zar had commanded him to build a new temple in the mountains, at a place to be made known by
the voice of the god speaking out of the box.

This time, there would be no doubts and no objections. A procession would set out, headed by the new
revelator bearing the box, and when the clicking voice of the god spoke rapidly out of it, the site would be marked
and work would begin. No local labor would ever be employed on such temples; the masons and woodworkers
would be strangers, come from afar and speaking a strange tongue, and when the temple was completed, they would
never be seen to leave it. Men would say that they had been put to death by the priest and buried under the altar to
preserve the secrets of the god. And there would always be an idol to preserve the secrets of the god. And there
would always be an idol of Yat-Zar, obviously of heavenly origin, since its workmanship was beyond the powers of
any local craftsman. The priests of such a temple would be exempt, by divine decree, from the rule of yearly travel.

Nobody, of course, would have the least idea that there was a uranium mine in operation under it, shipping ore
to another time-line. The Hulgun people knew nothing about uranium, and neither did they as much as dream that
there were other time-lines. The secret of paratime transposition belonged exclusively to the First Level civilization
which had discovered it, and it was a secret that was guarded well.

* * * * *

Stranor Sleth, dropping to the bottom of the antigrav shaft, cast a hasty and instinctive glance to the right,
where the freight conveyers were. One was gone, taking its cargo over hundreds of thousands of para-years to the
First Level. Another had just returned, empty, and a third was receiving its cargo from the robot mining machines
far back under the mountain. Two young men and a girl, in First Level costumes, sat at a bank of instruments and
visor-screens, handling the whole operation, and six or seven armed guards, having inspected the newly-arrived
conveyer and finding that it had picked up nothing inimical en route, were relaxing and lighting cigarettes. Three of
them, Stranor Sleth noticed, wore the green uniforms of the Paratime Police.
nobility on his breast, and carried a sigma-ray needler in a belt holster.

"Were you waiting long, gentlemen?" Stranor Sleth asked. "I was holding Sunset Sacrifice up in the temple."

"No, we just got here," Brannad Klav said. "This is Verkan Vall, Mavrad of Nerros, special assistant to Chief Tortha of the Paratime Police, Stranor Sleth, our resident agent here."

Stranor Sleth touched hands with Verkan Vall.

"I've heard a lot about you, sir," he said. "Everybody working in paratime has, of course. I'm sorry we have a situation here that calls for your presence, but since we have, I'm glad you're here in person. You know what our trouble is, I suppose?"

"In a general way," Verkan Vall replied. "Chief Tortha, and Brannad Klav, have given me the main outline, but I'd like to have you fill in the details."

"Well, I told you everything," Brannad Klav interrupted impatiently. "It's just that Stranor's let this blasted local king, Kurchuk, get out of control. If I--" He stopped short, catching sight of the shoulder holster under Stranor Sleth's left arm. "Were you wearing that needler up in the temple?" he demanded.

"You're blasted right I was!" Stranor Sleth retorted. "And any time I can't arm myself for my own protection on this time-line, you can have my resignation. I'm not getting into the same jam as those people at Zurb."

"Well, never mind about that," Verkan Vall intervened. "Of course Stranor Sleth has a right to arm himself; I wouldn't think of being caught without a weapon on this time-line, myself. Now, Stranor, suppose you tell me what's been happening, here, from the beginning of this trouble."

"It started, really, about five years ago, when Kurchuk, the King of Zurb, married this Chuldun princess, Darith, from the country over beyond the Black Sea, and made her his queen, over the heads of about a dozen daughters of the local nobility, whom he'd married previously. Then he brought in this Chuldun scribe, Labdurg, and made him Overseer of the Kingdom--roughly, prime minister. There was a lot of dissatisfaction about that, and for a while it looked as though he was going to have a revolution on his hands, but he brought in about five thousand Chuldun mercenaries, all archers--these Hulguns can't shoot a bow worth beans--so the dissatisfaction died down, and so did most of the leaders of the disaffected group. The story I get is that this Labdurg arranged the marriage, in the first place. It looks to me as though the Chuldun emperor is intending to take over the Hulgun kingdoms, starting with Zurb.

"Well, these Chulduns all worship a god called Muz-Azin. Muz-Azin is a crocodile with wings like a bat and a lot of knife blades in his tail. He makes this Yat-Zar look downright beautiful. So do his habits. Muz-Azin fancies human sacrifices. The victims are strung up by the ankles on a triangular frame and lashed to death with iron-barbed whips. Nasty sort of a deity, but this is a nasty time-line. The people here get a big kick out of watching these sacrifices. Much better show than our bunny-killing. The victims are usually criminals, or overage or incorrigible slaves, or prisoners of war.

"Of course, when the Chulduns began infiltrating the palace, they brought in their crocodile-god, too, and a flock of priests, and King Kurchuk let them set up a temple in the palace. Naturally, we preached against this heathen idolatry in our temples, but religious bigotry isn't one of the numerous imperfections of this sector. Everybody's deity is as good as anybody else's--indifferentism, I believe, is the theological term. Anyhow, on that basis things went along fairly well, till two years ago, when we had this run of bad luck."

"Bad luck!" Brannad Klav snorted. "That's the standing excuse of every incompetent!"

"Go on, Stranor; what sort of bad luck?" Verkan Vall asked.

"Well, first we had a drought, beginning in early summer, that burned up most of the grain crop. Then, when that broke, we got heavy rains and hailstorms and floods, and that destroyed what got through the dry spell. When they harvested what little was left, it was obvious there'd be a famine, so we brought in a lot of grain by conveyer and distributed it from the temples--miraculous gift of Yat-Zar, of course. Then the main office on First Level got scared about flooding this time-line with a lot of unaccountable grain and were afraid we'd make the people suspicious, and ordered it stopped.

"Then Kurchuk, and I might add that the kingdom of Zurb was the hardest hit by the famine, ordered his army mobilized and started an invasion of the Jumdun country, south of the Carpathians, to get grain. He got his army chopped up, and only about a quarter of them got back, with no grain. You ask me, I'd say that Labdurg framed it to happen that way. He advised Kurchuk to invade, in the first place, and I mentioned my suspicion that Chombrog, the Chuldun Emperor, is planning to move in on the Hulgun kingdoms. Well, what would be smarter than to get Kurchuk's army smashed in advance?"

"How did the defeat occur?" Verkan Vall asked. "Any suspicion of treachery?"

"Nothing you could put your finger on, except that the Jumduns seemed to have pretty good intelligence about Kurchuk's invasion route and battle plans. It could have been nothing worse than stupid tactics on Kurchuk's part. See, these Hulguns, and particularly the Zurb Hulguns, are spearmen. They fight in a fairly thin line, with heavy-
armed infantry in front and light infantry with throwing-spears behind. The nobles fight in light chariots, usually at
the center of the line, and that's where they were at this Battle of Jorm. Kurchuk himself was at the center, with his
Chuldun archers massed around him.

"The Jumduns use a lot of cavalry, with long swords and lances, and a lot of big chariots with two javelin men
and a driver. Well, instead of ramming into Kurchuk's center, where he had his archers, they hit the extreme left and
folded it up, and then swung around behind and hit the right from the rear. All the Chuldun archers did was stand
fast around the king and shoot anybody who came close to them: they were left pretty much alone. But the Hulgun
spearmen were cut to pieces. The battle ended with Kurchuk and his nobles and his archers making a fighting
retreat, while the Jumdun cavalry were chasing the spearmen every which way and cutting them down or lancing
them as they ran.

"Well, whether it was Labdurg's treachery or Kurchuk's stupidity, in either case, it was natural for the archers to
come off easiest and the Hulgun spearmen to pay the butcher's bill. But try and tell these knuckle-heads anything
like that! Muz-Azin protected the Chulduns, and Yat-Zar let the Hulguns down, and that was all there was to it. The
Zurb temple started losing worshipers, particularly the families of the men who didn't make it back from Jorm.

"If that had been all there'd been to it, though, it still wouldn't have hurt the mining operations, and we could
have got by. But what really tore it was when the rabbits started to die." Stranor Sleth picked up a cigar from his
desk and bit the end, sputting it out disgustedly. "Tularemia, of course," he said, touching his lighter to the tip.
"When that hit, they started going over to Muz-Azin in droves, not only at Zurb but all over the Six Kingdoms. You
ought to have seen the house we had for Sunset Sacrifice, this evening! About two hundred, and we used to get two
thousand. It used to be all two men could do to lift the offering box at the door, afterward, and all the money we took
in tonight I could put in one pocket!" The high priest used language that would have been considered unclerical even
among the Hulguns.

Verkan Vall nodded. Even without the quickie hypno-mech he had taken for this sector, he knew that the rabbit
was domesticated among the Proto-Aryan Hulguns and was their chief meat animal. Hulgun rabbits were even a
minor import on the First Level, and could be had at all the better restaurants in cities like Dhergabar. He mentioned
that.

"That's not the worst of it," Stranor Sleth told him. "See, the rabbit's sacred to Yat-Zar. Not taboo; just sacred.
They have to use a specially consecrated knife to kill them--consecrating rabbit knives has always been an item of
temple revenue--and they must say a special prayer before eating them. We could have got around the rest of it, even
the Battle of Jorm--punishment by Yat-Zar for the sin of apostasy--but Yat-Zar just wouldn't make rabbits sick. Yat-
Zar thinks too well of rabbits to do that, and it'd not been any use claiming he would. So there you are."

"Well, I take the attitude that this situation is the result of your incompetence," Brannad Klav began, in a
bullyragging tone. "You're not only the high priest of this temple, you're the acknowledged head of the religion in all
the Hulgun kingdoms. You should have had more hold on the people than to allow anything like this to happen."

"Hold on the people!" Stranor Sleth fairly howled, appealing to Verkan Vall. "What does he think a religion is,
on this sector, anyhow? You think these savages dreamed up that six-armed monstrosity, up there, to express their
yearning for higher things, or to symbolize their moral ethos, or as a philosophical escape-hatch from the dilemma
of causation? They never even heard of such matters. On this sector, gods are strictly utilitarian. As long as they take
care of their worshipers, they get their sacrifices: when they can't put out, they have to get out. How do you suppose
these Chulduns, living in the Caucasus Mountains, got the idea of a god like a crocodile, anyhow? Why, they got it
from Homran traders, people from down in the Nile Valley. They had a god, once, something basically like a billy
goat, but he let them get licked in a couple of battles, so out he went. Why, all the deities on this sector have
hyphenated names, because they're combinations of several deities, worshiped in one person. Do you know anything
about the history of this sector?" he asked the Paratime Police officer.

"Well, it develops from an alternate probability of what we call the Nilo-Mesopotamian Basic sector-group,"
Verkan Vall said. "On most Nilo-Mesopotamian sectors, like the Macedonian Empire Sector, or the Alexandrian-
Roman or Alexandrian-Punic or Indo-Turanian or Europto-American, there was an Aryan invasion of Eastern Europe
and Asia Minor about four thousand elapsed years ago. On this sector, the ancestors of the Aryans came in about
fifteen centuries earlier, as neolithic savages, about the time that the Sumerian and Egyptian civilizations were first
developing, and overran all southeast Europe, Asia Minor and the Nile Valley. They developed to the bronze-age
culture of the civilizations they overthrew, and then, more slowly, to an iron-age culture. About two thousand years
ago, they were using hardened steel and building large stone cities, just as they do now. At that time, they reached
cultural stasis. But as for their religious beliefs, you've described them quite accurately. A god is only worshiped as
long as the people think him powerful enough to aid and protect them; when they lose that confidence, he is
discarded and the god of some neighboring people is adopted instead." He turned to Brannad Klav. "Didn't Stranor
report this situation to you when it first developed?" he asked. "I know he did; he speaks of receiving shipments of
grain by conveyer for temple distribution. Then why didn't you report it to Paratime Police? That's what we have a Paratime Police Force for."

"Well, yes, of course, but I had enough confidence in Stranor Sleth to think that he could handle the situation himself. I didn't know he'd gone slack--"  

"Look, I can't make weather, even if my parishioners think I can," Stranor Sleth defended himself. "And I can't make a great military genius out of a blockhead like Kurchuk. And I can't immunize all the rabbits on this time-line against tularemia, even if I'd had any reason to expect a tularemia epidemic, which I hadn't because the disease is unknown on this sector; this is the only outbreak of it anybody's ever heard of on any Proto-Aryan time-line."

"No, but I'll tell you what you could have done," Verkan Vall told him. "When this Kurchuk started to apostatize, you could have gone to him at the head of a procession of priests, all paratimers and all armed with energy-weapons, and pointed out his spiritual duty to him, and if he gave you any back talk, you could have pulled out that needler and rayed him down and then cried, 'Behold the vengeance of Yat-Zar upon the wicked king!' I'll bet any sum at any odds that his successor would have thought twice about going over to Muz-Azin, and none of these other kings would have even thought once about it."

"Ha, that's what I wanted to do!" Stranor Sleth exclaimed. "And who stopped me? I'll give you just one guess."

"Well, it seems there was slackness here, but it wasn't Stranor Sleth who was slack," Verkan Vall commented.

"Well! I must say; I never thought I'd hear an officer of the Paratime Police criticizing me for trying to operate inside the Paratime Transposition Code!" Brannad Klav exclaimed.

Verkan Vall, sitting on the edge of Stranor Sleth's desk, aimed his cigarette at Brannad Klav like a blaster.

"Now, look," he began. "There is one, and only one, inflexible law regarding outtime activities. The secret of paratime transposition must be kept inviolate, and any activity tending to endanger it is prohibited. That's why we don't allow the transposition of any object of extraterrestrial origin to any time-line on which space travel has not been developed. Such an object may be preserved, and then, after the local population begin exploring the planet from whence it came, there will be dangerous speculations and theories as to how it arrived on Terra at such an early date. I came within inches, literally, of getting myself killed, not long ago, cleaning up the result of a violation of that regulation. For the same reason, we don't allow the export, to outtime natives, of manufactured goods too far in advance of their local culture. That's why, for instance, you people have to hand-finish all those big Yat-Zar idols, to remove traces of machine work. One of those things may be around, a few thousand years from now, when these people develop a mechanical civilization. But as far as raying down this Kurchuk is concerned, these Hulguns are completely nonscientific. They wouldn't have the least idea what happened. They'd believe that Yat-Zar struck him dead, as gods on this plane of culture are supposed to do, and if any of them noticed the needler at all, they'd think it was just a holy amulet of some kind."

"But the law is the law--" Brannad Klav began.

Verkan Vall shook his head. "Brannad, as I understand, you were promoted to your present position on the retirement of Salvan Marth, about ten years ago; up to that time, you were in your company's financial department. You were accustomed to working subject to the First Level Commercial Regulation Code. Now, any law binding upon our people at home, on the First Level, is inflexible. It has to be. We found out, over fifty centuries ago, that laws have to be rigid and without discretionary powers in administration in order that people may be able to predict their effect and plan their activities accordingly. Naturally, you became conditioned to operating in such a climate of legal inflexibility.

"But in paratime, the situation is entirely different. There exist, within the range of the Ghalbndon-Hesthor paratemporal-field generator, a number of time-lines of the order of ten to the hundred-thousandth power. In effect, that many different worlds. In the past ten thousand years, we have visited only the tiniest fraction of these, but we have found everything from time-lines inhabited only by subhuman ape-men to Second Level civilizations which are our own equal in every respect but knowledge of paratemporal transposition. We even know of one Second Level civilization which is approaching the discovery of an interstellar hyperspatial drive, something we've never even come close to. And in between are every degree of savagery, barbarism and civilization. Now, it's just not possible to frame any single code of laws applicable to conditions on all of these. The best we can do is prohibit certain flagrantly immoral types of activity, such as slave-trading, introduction of new types of narcotic drugs, or out-and-out piracy and brigandage. If you're in doubt as to the legality of anything you want to do outtime, go to the Judicial Section of the Paratime Commission and get an opinion on it. That's where you made your whole mistake. You didn't find out just how far it was allowable for you to go."

He turned to Stranor Sleth again. "Well, that's the background, then. Now tell me about what happened yesterday at Zurb."

"Well, a week ago, Kurchuk came out with this decree closing our temple at Zurb and ordering his subjects to perform worship and make money offerings to Muz-Azin. The Zurb temple isn't a mask for a mine: Zurb's too far
neighbors, and, where the streets were wider, occasional groups of large buildings would be surrounded by buildings, which were thatched. Here and there, some huge pile of masonry would rear itself above its lower supported by pillars within. Even in the poorer sections, this was true except for the very meanest houses and out-

Although there would be considerable snow in winter, the roofs were usually flat, probably massive stone slabs of Zurb--taken, the high priest explained, by infrared light from an airboat over the city at night. It showed a city of keyboard. A picture, projected from the microfilm-bank, appeared on the view-screen. It was an air-view of the city 

transpose in to them. This palace is really a walled city inside a city. Here, I'll show you."

"How about these dungeons?" he asked. "How are they located, and how can we get in to them?"

"I know it will, because I'll put through a recommendation to that effect, if those six men are tortured to death tomorrow," Verkan Vall stated. "And in the fifty years that I've been in the Police Department, I've only heard of five such recommendations being ignored by the commission. You know, Fourth Level Mineral Products Syndicate is after your franchise. Ordinarily, they wouldn't have a chance of getting it, but with this, maybe they will, even without my recommendation. This was all your fault, for ignoring Stranor Sleth's proposal and for denying those men the right to carry energy weapons."

"Well, we were only trying to stay inside the Paratime Code," Brannad Klav pleaded. "If it isn't too late, now, you can count on me for every co-operation." He fiddled with some papers on the desk. "What do you want me to do to help?"

"I'll tell you that in a minute."

"Going around the desk, he sat down and, after looking in the index-screen, punched a combination on the keyboard. A picture, projected from the microfilm-bank, appeared on the view-screen. It was an air-view of the city of Zurb--taken, the high priest explained, by infrared light from an airboat over the city at night. It showed a city of an entirely pre-mechanical civilization, with narrow streets, lined on either side by low one and two story buildings. Although there would be considerable snow in winter, the roofs were usually flat, probably massive stone slabs supported by pillars within. Even in the poorer sections, this was true except for the very meanest houses and out-buildings, which were thatched. Here and there, some huge pile of masonry would rear itself above its lower neighbors, and, where the streets were wider, occasional groups of large buildings would be surrounded by
battlemented walls. Stranor Sleth indicated one of the larger of these.

"Here's the palace," he said. "And here's the temple of Yat-Zar, about half a mile away." He touched a large building, occupying an entire block; between it and the palace was a block-wide park, with lawns and trees on either side of a wide roadway connecting the two.

"Now, here's a detailed view of the palace." He punched another combination; the view of the City was replaced by one, taken from directly overhead, of the walled palace area. "Here's the main gate, in front, at the end of the road from the temple," he pointed out. "Over here, on the left, are the slaves' quarters and the stables and workshops and store houses and so on. Over here, on the other side, are the nobles' quarters. And this,"--he indicated a towering structure at the rear of the walled enclosure--"is the citadel and the royal dwelling. Audience hall on this side; harem over here on this side. A wide stone platform, about fifteen feet high, runs completely across the front of the citadel, from the audience hall to the harem. Since this picture was taken, the new temple of Muz-Azin was built right about here." He indicated that it extended out from the audience hall into the central courtyard. "And out here on the platform, they've put up about a dozen of these triangles, about twelve feet high, on which the sacrificial victims are whipped to death."

"Yes. About the only way we could get down to the dungeons would be to make an airdrop onto the citadel roof and fight our way down with needlers and blasters, and I'm not willing to do that as long as there's any other way," Verkan Vall said. "We'd lose men, even with needlers against bows, and there's a chance that some of our equipment might be lost in the melee and fall into outtime hands. You say this sacrifice comes off tomorrow at sunset?"

"That would be about actual sunset plus or minus an hour; these people aren't astronomers, they don't even have good sundials, and it might be a cloudy day," Stranor Sleth said. "There will be a big idol of Muz-Azin on a cart, set about here." He pointed. "After the sacrifice, it is to be dragged down this road, outside, to the temple of Yat-Zar, and set up there. The temple is now occupied by about twenty Chuldun mercenaries and five or six priests of Muz-Azin. They haven't, of course, got into the House of Yat-Zar; the door's of impervium steel, about six inches thick, with a plating of collapsed nickel under the gilding. It would take a couple of hours to cut through it with our best atomic torch; there isn't a tool on this time-line that could even scratch it. And the insides of the walls are lined with the same thing."

"Do you think our people have been tortured, yet?" Verkan Vall asked.

"No." Stranor Sleth was positive. "They'll be fairly well treated, until the sacrifice. The idea's to make them last as long as possible on the triangles; Muz-Azin likes to see a slow killing, and so does the mob of spectators."

"That's good. Now, here's my plan. We won't try to rescue them from the dungeons. Instead, we'll transpose back to the Zurb temple from the First Level, in considerable force--say a hundred or so men--and march on the palace, to force their release. You're in constant radio communication with all the other temples on this time-line, I suppose?"

"Yes, certainly."

"All right. Pass this out to everybody, authority Paratime Police, in my name, acting for Tortha Karf. I want all paratimers who can possibly be spared to transpose to First Level immediately and rendezvous at the First Level terminal of the Zurb temple conveyer as soon as possible. Close down all mining operations, and turn over temple routine to the native under-priests. You can tell them that the upper-priests are retiring to their respective Houses of Yat-Zar to pray for the deliverance of the priests in the hands of King Kurchuk. And everybody is to bring back his priestly regalia to the First Level; that will be needed." He turned to Brannad Klav. "I suppose you keep spare regalia in stock on the First Level?"

"Yes, of course; we keep plenty of everything in stock. Robes, miters, false beards of different shades, everything."

"And these big Yat-Zar idols: they're mass-produced on the First Level? You have one available now? Good. I'll want some alterations made on one. For one thing, I'll want it plated heavily, all over, with collapsed nickel. For another, I'll want it fitted with antigrav units and some sort of propulsion-units, and a loud-speaker, and remote control.

"And, Stranor, you get in touch with this swordmaker, Crannar Jurth, and alert him to co-operate with us. Tell him to start calling Zurb temple on his radio about noon tomorrow, and keep it up till he gets an answer. Or, better, tell him to run his conveyer to his First Level terminal, and bring with him an extra suit of clothes appropriate to the role of journeyman-mechanic. I'll want to talk to him, and furnish him with special equipment. Got all that? Well, carry on with it, and bring your own paratimers, priests and mining operators, back with you as soon as you've taken care of everything. Brannad, you come with me, now. We're returning to First Level immediately. We have a lot of work to do, so let's get started."

"Anything I can do to help, just call on me for it," Brannad Klav promised earnestly. "And, Stranor, I want to
By noon of the next day, Verkan Vall had at least a hundred men gathered in the big room at the First Level fissionables refinery at Jarnabar, spatially co-existent with the Fourth Level temple of Yat-Zar at Zurb. He was having a little trouble distinguishing between them, for every man wore the fringed blue robe and golden miter of an upper-priest, and had his face masked behind a blue false beard. It was, he admitted to himself, a most ludicrous-looking assemblage; one of the most ludicrous things about it was the fact that it would have inspired only pious awe in a Hulgun of the Fourth Level Proto-Aryan Sector. About half of them were priests from the Transtemporal Mining Corporation's temples; the other half were members of the Paratime Police. All of them wore, in addition to their temple knives, holstered sigma-ray needleers. Most of them carried ultrasonic paralyzers, eighteen-inch batonlike things with bulbous ends. Most of the Paratime Police and a few of the priests also carried either heat-ray pistols or neutron-disruption blasters; Verkan Vall wore one of the latter in a left-hand belt holster.

The Paratime Police were lined up separately for inspection, and Stranor Sleth, Tammand Drav of the Zurb temple, and several other high priests were checking the authenticity of their disguises. A little apart from the others, a Paratime Policeman, in high priest's robes and beard, had a square box slung in front of him; he was fiddling with knobs and buttons on it, practicing. A big idol of Yat-Zar, on antigravity, was floating slowly about the room in obedience to its remote controls, rising and lowering, turning about and pirouetting gracefully.

"Hey, Vall!" he called to his superior. "How's this?"

The idol rose about five feet, turned slowly in a half-circle, moved to the right a little, and then settled slowly toward the floor.

"Fine, fine, Horv," Verkan Vall told him, "but don't set it down on anything, or turn off the antigravity. There's enough collapsed nickel-plating on that thing to sink it a yard in soft ground."

"I don't know what the idea of that was," Brannad Klav, standing beside him, said. "Understand, I'm not criticizing. I haven't any right to, under the circumstances. But it seems to me that armoring that thing in collapsed nickel was an unnecessary precaution."

"Maybe it was," Verkan Vall agreed. "I sincerely hope so. But we can't take any chances. This operation has to be absolutely right. Ready, Tammand? All right; first detail into the conveyer."

He turned and strode toward a big dome of fine metallic mesh, thirty feet high and sixty in diameter, at the other end of the room. Tammand Drav, and his ten paratimer priests, and Brannad Klav, and ten Paratime Police, followed him in. One of the latter slid shut the door and locked it; Verkan Vall went to the control desk, at the center of the dome, and picked up a two-foot globe of the same fine metallic mesh, opening it and making some adjustments inside, then attaching an electric cord and closing it. He laid the globe on the floor near the desk and picked up the hand battery at the other end of the attached cord.

"Not taking any chances at all, are you?" Brannad Klav asked, watching this operation with interest.

"I never do, unnecessarily. There are too many necessary chances that have to be taken, in this work." Verkan Vall pressed the button on the hand battery. The globe on the floor flashed and vanished. "Yesterday, five paratimers were arrested. Any or all of them could have had door-activators with them. Stranor Sleth says they were not tortured, but that is a purely inferential statement. They may have been, and the use of the activator may have been extorted from one of them. So I want a look at the inside of that conveyer-chamber before we transpose into it."

He laid the hand battery, with the loose-dangling wire that had been left behind, on the desk, then lit a cigarette. The others gathered around, smoking and watching, careful to avoid the place from which the globe had vanished. Thirty minutes passed, and then, in a queer iridescence, the globe reappeared. Verkan Vall counted ten seconds and picked it up, taking it to the desk and opening it to remove a small square box. This he slid into a space under the desk and flipped a switch. Instantly, a view-screen lit up and a three-dimensional picture appeared—the interior of a big room a hundred feet square and some seventy in height. There was a big desk and a radio; tables, couches, chairs and an arms-rack full of weapons, and at one end, a remarkably clean sixty-foot circle on the concrete floor, outlined in faintly luminous red.

"How about it?" Verkan Vall asked Tammand Drav. "Anything wrong?"

The Zurb high priest shook his head. "Just as we left it," he said. "Nobody's been inside since we left."

One of the policemen took Verkan Vall's place at the control desk and threw the master switch, after checking the instruments. Immediately, the paratemporal-transposition field went on with a humming sound that mounted to a high scream, then settled to a steady drone. The mesh dome flickered with a cold iridescence and vanished, and they were looking into the interior of a great fissionables refinery plant, operated by paratimers on another First Level time-line. The structural details altered, from time-line to time-line, as they watched. Buildings appeared and vanished. Once, for a few seconds, they were inside a cool, insulated bubble in the midst of molten lead. Tammand
Drav jerked a thumb at it, before it vanished.

"That always bothers me," he said. "Bad place for the field to go weak. I'm fussy as an old hen about inspection of the conveyer, on account of that."

"Don't blame you," Verkan Vall agreed. "Probably the cooling system of a breeder-pile."

They passed more swiftly, now, across the Second Level and the Third. Once they were in the midst of a huge land battle, with great tanklike vehicles spouting flame at one another. Another moment was spent in an air bombardment. On any time-line, this section of East Europe was a natural battleground. Once a great procession marched toward them, carrying red banners and huge pictures of a coarse-faced man with a black mustache—Verkan Vall recognized the environment as Fourth Level Europo-American Sector. Finally, as the transposition-rate slowed, they saw a clutter of miserable thatched huts, in the rear of a granite wall of a Fourth Level Hulgun temple of Yat-Zar—a temple not yet infiltrated by Transtemporal Mining Corporation agents. Finally, they were at their destination. The dome around them became visible, and an overhead green light flashed slowly on and off.

Verkan Vall opened the door and stepped outside, his needler drawn. The House of Yat-Zar was just as he had seen it in the picture photographed by the automatic reconnaissance-conveyer. The others crowded outside after him. One of the regular priests pulled off his miter and beard and went to the radio, putting on a headset. Verkan Vall and Tammand Drav snapped on the visiscreen, getting a view of the Holy of Holies outside.

There were six men there, seated at the upper-priests' banquet table, drinking from golden goblets. Five of them wore the black robes with green facings which marked them as priests of Muz-Azin; the sixth was an officer of the Chuldun archers, in gilded mail and helmet.

"Why, those are the sacred vessels of the temple!" Tammand Drav cried, scandalized. Then he laughed in self-ridicule. "I'm beginning to take this stuff seriously, myself; time I put in for a long vacation. I was actually shocked at the sacrilege!"

"Well, let's overtake the infidels in their sins," Verkan Vall said. "Paralyzers will be good enough."

He picked up one of the bulb-headed weapons, and unlocked the door. Tammand Drav and another of the priests of the Zurb temple following and the others crowding behind, they passed out through the veils, and burst into the Holy of Holies. Verkan Vall pointed the bulb of his paralyzer at the six seated men and pressed the button; other paralyzers came into action, and the whole sextet were knocked senseless. The officer rolled from his chair and fell to the floor in a clatter of armor. Two of the priests slumped forward on the table. The others merely sank back in their chairs, dropping their goblets.

"Give each one of them another dose, to make sure," Verkan Vall directed a couple of his own men. "Now, Tammand; any other way into the main temple beside that door?"

"Up those steps," Tammand Drav pointed. "There's a gallery along the side; we can cover the whole room from there."

"Take your men and go up there. I'll take a few through the door. There'll be about twenty archers out there, and we don't want any of them loosing any arrows before we can knock them out. Three minutes be time enough?"

"Easily. Make it two," Tammand Drav said.

He took his priests up the stairway and vanished into the gallery of the temple. Verkan Vall waited until one minute had passed and then, followed by Brannad Klav and a couple of Paratime Policemen, he went under the plinth and peered out into the temple. Five or six archers, in steel caps and sleeveless leather jackets sewn with steel rings, were gathered around the altar, cooking something in a pot on the fire. Most of the others, like veteran soldiers, were sprawled on the floor, trying to catch a short nap, except half a dozen, who crouched in a circle, playing some game with dice—another almost universal military practice.

The two minutes were up. He aimed his paralyzer at the men around the altar and squeezed the button, swinging it from one to another and knocking them down with a bludgeon of inaudible sound. At the same time, Tammand Drav and his detail were stunning the gamblers. Stepping forward and to one side, Verkan Vall, Brannad Klav and the others took care of the sleepers on the floor. In less than thirty seconds, every Chuldun in the temple was incapacitated.

"All right, make sure none of them come out of it prematurely," Verkan Vall directed. "Get their weapons, and be sure nobody has a knife or anything hidden on him. Who has the syringe and the sleep-drug ampoules?"

Somebody had, it developed, who was still on the First Level, to come up with the second conveyer load. Verkan Vall swore. Something like this always happened, on any operation involving more than half a dozen men.

"Well, some of you stay here: patrol around, and use your paralyzers on anybody who even twitches a muscle." Ultrasonics were nice, effective, humane police weapons, but they were unreliable. The same dose that would keep one man out for an hour would paralyze another for no more than ten or fifteen minutes. "And be sure none of them are playing 'possum."
He went back through the door under the plinth, glancing up at the decorated wooden screen and wondering how much work it would take to move the new Yat-Zar in from the conveyers. The five priests and the archer-captain were still unconscious; one of the policemen was searching them.

"Here's the sort of weapons these priests carry," he said, holding up a short iron mace with a spiked head. "Carry them on their belts." He tossed it on the table, and began searching another knocked-out hierophant. "Like this--Hey! Look at this, will you!"

He drew his hand from under the left side of the senseless man's robe and held up a sigma-ray needler. Verkan Vall looked at it and nodded grimly.

"Had it in a regular shoulder holster," the policeman said, handing the weapon across the table. "What do you think?"

"Find anything else funny on him?"

"Wait a minute." The policeman pulled open the robe and began stripping the priest of Muz-Azin; Verkan Vall came around the table to help. There was nothing else of a suspicious nature.

"Could have got it from one of the prisoners, but I don't like the familiar way he's wearing that holster," Verkan Vall said. "Has the conveyer gone back, yet?" When the policeman nodded, he continued: "When it returns, take him to the First Level. I hope they bring up the sleep-drug with the next load. When you get him back, take him to Dhergabar by strato-rocket immediately, and make sure he gets back alive. I want him questioned under narco-hypnosis by a regular Paratime Commission psycho-technician, in the presence of Chief Tortha Karf and some responsible Commission official. This is going to be hot stuff."

Within an hour, the whole force was assembled in the temple. The wooden screen had presented no problem--it slid easily to one side--and the big idol floated on antigravity in the middle of the temple. Verkan Vall was looking anxiously at his watch.

"It's about two hours to sunset," he said, to Stranor Sleth. "But as you pointed out, these Hulguns aren't astronomers, and it's a bit cloudy. I wish Crannar Jurth would call in with something definite."

Another twenty minutes passed. Then the man at the radio came out into the temple.

"O. K.!” he called. "The man at Crannar Jurth's called in. Crannar Jurth contacted him with a midget radio he has up his sleeve; he's in the palace courtyard now. They haven't brought out the victims, yet, but Kurchuk has just been carried out on his throne to that platform in front of the citadel. Big crowd gathering in the inner courtyard; more in the streets outside. Palace gates are wide open."

"That's it!" Verkan Vall cried. "Form up; the parade's starting. Brannad, you and Tammand and Stranor and I in front; about ten men with paralyzers a little behind us. Then Yat-Zar, about ten feet off the ground, and then the others. Forward--ho-o-o!"

* * * * *

They emerged from the temple and started down the broad roadway toward the palace. There was not much of a crowd, at first. Most of Zurb had flocked to the palace earlier; the lucky ones in the courtyard and the late comers outside. Those whom they did meet stared at them in open-mouthed amazement, and then some, remembering their doubts and blasphemies, began howling for forgiveness. Others--a substantial majority--realizing that it would be upon King Kurchuk that the real weight of Yat-Zar's six hands would fall, took to their heels, trying to put as much distance as possible between them and the palace before the blow fell.

As the procession approached the palace gates, the crowds were thicker, made up of those who had been unable to squeeze themselves inside. The panic was worse, here, too. A good many were trampled and hurt in the rush to escape, and it became necessary to use paralyzers to clear a way. That made it worse: everybody was sure that Yat-Zar was striking sinners dead left and right.

Fortunately, the gates were high enough to let the god through without losing altitude appreciably. Inside, the mob surged back, clearing a way across the courtyard. It was only necessary to paralyze a few here, and the levitated idol and its priestly attendants advanced toward the stone platform, where the king sat on his throne, flanked by court functionaries and black-robed priests of Muz-Azin. In front of this, a rank of Chuldun archers had been drawn up.

"Horv; move Yat-Zar forward about a hundred feet and up about fifty," Verkan Vall directed. "Quickly!"

As the six-armed anthropomorphic idol rose and moved closer toward its saurian rival, Verkan Vall drew his needler, scanning the assemblage around the throne anxiously.

"Where is the wicked King?" a voice thundered--the voice of Stranor Sleth, speaking into a midget radio tuned to the loud-speaker inside the idol. "Where is the blasphemer and desecrator, Kurchuk?"

"There's Labdurg, in the red tunic, beside the throne," Tammand Drav whispered. "And that's Ghromdur, the Muz-Azin high priest, beside him."

Verkan Vall nodded, keeping his eyes on the group on the platform. Ghromdur, the high priest of Muz-Azin,
was edging backward and reaching under his robe. At the same time, an officer shouted an order, and the Chuldun archers drew arrows from their quivers and fitted them to their bowstrings. Immediately, the ultrasonic paralysis of the advancing paratimers went into action, and the mercenaries began dropping.

"Lay down your weapons, fools!" the amplified voice boomed at them. "Lay down your weapons or you shall surely die! Who are you, miserable wretches, to draw bows against Me?"

At first a few, then all of them, the Chulduns lowered or dropped their weapons and began edging away to the sides. At the center, in front of the throne, most of them had been knocked out. Verkan Vall was still watching the Muz-Azin high priest intently; as Ghromdur raised his arm, there was a flash and a puff of smoke from the front of Yat-Zar—the paint over the collapsed nickel was burned off, but otherwise the idol was undamaged. Verkan Vall swung up his needle and rayed Ghromdur dead; as the man in the green-faced black robes fell, a blaster clattered on the stone platform.

"Is that your puny best, Muz-Azin?" the booming voice demanded. "Where is your high priest now?"

"Horv; face Yat-Zar toward Muz-Azin," Verkan Vall said over his shoulder, drawing his blaster with his left hand. Like all First Level people, he was ambidextrous, although, like all paratimers, he habitually concealed the fact while outtime. As the levitated idol swung slowly to look down upon its enemy on the built-up cart, Verkan Vall aimed the blaster and squeezed.

In a spot less than a millimeter in diameter on the crocodile idol's side, a certain number of neutrons in the atomic structure of the stone from which it was carved broke apart, becoming, in effect, atoms of hydrogen. With a flash and a bang, the idol burst and vanished. Yat-Zar gave a dirty laugh and turned his back on the cart, which was now burning fiercely facing King Kurchuk again.

"Get your hands up, all of you!" Verkan Vall shouted, in the First Level language, swinging the stubby muzzle of the blaster and the knob-tipped twin tubes of the needler to cover the group around the throne, "Come forward, before I start blasting!"

Labdurg raised his hands and stepped forward. So did two of the priests of Yat-Zar. They were quickly seized by Paratime Policemen who swarmed up onto the platform and disarmed. All three were carrying sigma-ray needlers, and Labdurg had a blaster as well.

King Kurchuk was clinging to the arms of his throne, a badly frightened monarch trying desperately not to show it. He was a big man, heavy-shouldered, black-bearded; under ordinary circumstances he would probably have cut an imposing figure, in his gold-washed mail and his golden crown. Now his face was a dirty gray, and he was biting nervously at his lower lip. The others on the platform were in even worse state. The Hulgun nobles were grouped together, trying to disassociate themselves from both the king and the priests of Muz-Azin. The latter were staring in a daze at the blazing cart from which their idol had just been blasted. And the dozen men who were to have done the actual work of the torture-sacrifice had all dropped their whips and were fairly gibbering in fear.

Yat-Zar, manipulated by the robed paratimer, had taken a position directly above the throne and was lowering slowly. Kurchuk stared up at the massive idol descending toward him, his knuckles white as he clung to the arms of his throne. He managed to hold out until he could feel the weight of the idol pressing on his head. Then, with a scream, he hurled himself from the throne and rolled forward almost to the edge of the platform. Yat-Zar moved to his throne. He managed to hold out until he could feel the weight of the idol pressing on his head. Then, with a scream, he hurled himself from the throne and rolled forward almost to the edge of the platform. Yat-Zar moved to his throne. He managed to hold out until he could feel the weight of the idol pressing on his head. Then, with a scream, he hurled himself from the throne and rolled forward almost to the edge of the platform. Yat-Zar moved to
wretch!"

* * * * *

The procession back to the temple was made quietly and sedately along an empty roadway. Yat-Zar seemed to
be in a kindly humor; the people of Zurb had no intention of giving him any reason to change his mood. The priests
of Muz-Azin and their torturers had been flung into the dungeon. Yorzuks, appointed regent for the duration of
Kurchuk's penance, had taken control and was employing Hulgun spearmen and hastily-converted Chuldun archers
to restore order and, incidentally, purge a few of his personal enemies and political rivals. The priests, with the three
prisoners who had been found carrying First Level weapons among them and Yat-Zar floating triumphantly in front,
entered the temple. A few of the devout, who sought admission after them, were told that elaborate and secret rites
were being held to cleanse the profaned altar, and sent away.

Verkan Vall and Brannad Klav and Stranor Sleth were in the conveyer chamber, with the Paratime Policemen
and the extra priests; along with them were the three prisoners. Verkan Vall pulled off his false beard and turned to
face these. He could see that they all recognized him.

"Now," he began, "you people are in a bad jam. You've violated the Paratime Transposition Code, the
Commercial Regulation Code, and the First Level Criminal Code, all together. If you know what's good for you,
you'll start talking."

"I'm not saying anything till I have legal advice," the man who had been using the local alias of Labdurg
replied. "And if you're through searching me, I'd like to have my cigarettes and lighter back."

"Smoke one of mine, for a change," Verkan Vall told him. "I don't know what's in yours beside tobacco." He
offered his case and held a light for the prisoner before lighting his own cigarette. "I'm going to be sure you get back
to the First Level alive."

The former Overseer of the Kindom of Zurb shrugged. "I'm still not talking," he said.

"Well, we can get it all out of you by narco-hypnosis, anyhow," Verkan Vall told him. "Besides, we got that
man of yours who was here at the temple when we came in. He's being given a full treatment, as a presumed outtime
native found in possession of First Level weapons. If you talk now it'll go easier with you."

The prisoner dropped the cigarette on the floor and tramped it out.

"Anything you cops get out of me, you'll have to get the hard way," he said. "I have friends on the First Level
who'll take care of me."

"I doubt that. They'll have their hands full taking care of themselves, after this gets out." Verkan Vall turned to
the two in the black robes. "Either of you want to say anything?" When they shook their heads, he nodded to a group
of his policemen; they were hustled into the conveyer. "Take them to the First Level terminal and hold them till I
come in. I'll be along with the next conveyer load."

* * * * *

The conveyer flashed and vanished. Brannad Klav stared for a moment at the circle of concrete floor from
whence it had disappeared. Then he turned to Verkan Vall.

"I still can't believe it," he said. "Why, those fellows were First Level paratimers. So was that priest, Ghromdur:
the one you rayed."

"Yes, of course. They worked for your rivals, the Fourth Level Mineral Products Syndicate; the outfit that was
trying to get your Proto-Aryan Sector fissionables franchise away from you. They operate on this sector already;
have the petroleum franchise for the Chuldun country, east of the Caspian Sea. They export to some of these
internal-combustion-engine sectors, like Euro-American. You know, most of the wars they've been fighting,
lately, on the Euro-American Sector have been, at least in part, motivated by rivalry for oil fields. But now that
the Euro-Americans have begun to release nuclear energy, fissionables have become more important than oil. In
less than a century, it's predicted that atomic energy will replace all other forms of power. Mineral Products
Syndicate wanted to get a good source of supply for uranium, and your Proto-Aryan Sector franchise was worth
grabbing.

"I had considered something like this as a possibility when Stranor, here, mentioned that tularemia was
normally unknown in Eurasia on this sector. That epidemic must have been started by imported germs. And I knew
that Mineral Products has agents at the court of the Chuldun emperor, Chombrog: they have to, to protect their oil
wells on his eastern frontiers. I spent most of last night checking up on some stuff by video-transcription from the
Paratime Commission's microfilm library at Dhergabar. I found out, for one thing, that while there is a King
Kurchuk of Zurb on every time-line for a hundred para-years on either side of this one, this is the only time-line on
which he married a Princess Darith of Chuldun, and it's the only time-line on which there is any trace of a Chuldun
scribe named Labdurg."

"That's why I went to all the trouble of having that Yat-Zar plated with collapsed nickel. If there were disguised
paratimers among the Muz-Azin party at Kurchuk's court, I expected one of them to try to blast our idol when we
brought it into the palace. I was watching Ghromdur and Labdurg in particular; as soon as Ghromdur used his blaster, I needled him. After that, it was easy."

"Was that why you insisted on sending that automatic viewer on ahead?"

"Yes. There was a chance that they might have planted a bomb in the House of Yat-Zar, here. I knew they'd either do that or let the place entirely alone. I suppose they were so confident of getting away with this that they didn't want to damage the conveyer or the conveyer chamber. They expected to use them, themselves, after they took over your company's franchise."

"Well, what's going to be done about it by the Commission?" Brannad Klav wanted to know.

"Plenty. The syndicate will probably lose their paratime license; any of its officials who had guilty knowledge of this will be dealt with according to law. You know, this was a pretty nasty business."

"You're telling me!" Stranor Sleth exclaimed. "Did you get a look at those whips they were going to use on our people? Pointed iron barbs a quarter-inch long braided into them, all over the lash-ends!"

"Yes. Any punitive action you're thinking about taking on these priests of Muz-Azin--the natives, I mean--will be ignored on the First Level. And that reminds me: you'd better work out a line of policy, pretty soon."

"Well, as for the priests and the torturers, I think I'll tell Yorzkuk to have them sold to the Bhunguns, to the east. They're always in the market for galley slaves," Stranor Sleth said. He turned to Brannad Klav. "And I'll want six gold crowns made up, as soon as possible. Strictly Hulgun design, with Yat-Zar religious symbolism, very rich and ornate, all slightly different. When I give Kurchuk absolution, I'll crown him at the altar in the name of Yat-Zar. Then I'll invite in the other five Hulgun kings, lecture them on their religious duties, make them confess their secret doubts, forgive them, and crown them, too. From then on, they can all style themselves as ruling by the will of Yat-Zar."

"And from then on, you'll have all of them eating out of your hand," Verkan Vall concluded. "You know, this will probably go down in Hulgun history as the Reformation of Ghullam the Holy. I've always wondered whether the theory of the divine right of kings was invented by the kings, to establish their authority over the people, or by the priests, to establish their authority over the kings. It works about as well one way as the other."

"What I can't understand is this," Brannad Klav said. "It was entirely because of my respect for the Paratime Code that I kept Stranor Sleth from using Fourth Level weapons and other techniques to control these people with a show of apparent miraculous powers. But this Fourth Level Mineral Products Syndicate was operating in violation of the Paratime Code by invading our franchise area. Why didn't they fake up a supernatural reign of terror to intimidate these natives?"

"Ha, exactly because they were operating illegally," Verkan Vall replied. "Suppose they had started using needlers and blasters and antigravity and nuclear-energy around here. The natives would have thought it was the power of Muz-Azin, of course, but what would you have thought? You'd have known, as soon as they tried it, that First Level paratimers were working against you, and you'd have laid the facts before the Commission, and this time-line would have been flooded with Paratime Police. They had to conceal their operations not only from the natives, as you do, but also from us. So they didn't dare make public use of First Level techniques."

"Of course, when we came marching into the palace with that idol on antigravity, they knew, at once, what was happening. I have an idea that they only tried to blast that idol to create a diversion which would permit them to escape—if they could have got out of the palace, they'd have made their way, in disguise, to the nearest Mineral Products Syndicate conveyer and transposed out of here. I realized that they could best delay us by blasting our idol, and that's why I had it plated with collapsed nickel. I think that where they made their mistake was in allowing Kurchuk to have those priests arrested, and insisting on sacrificing them to Muz-Azin. If it hadn't been for that, the Paratime Police wouldn't have been brought into this, at all."

"Well, Stranor, you'll want to get back to your temple, and Brannad and I want to get back to the First Level. I'm supposed to take my wife to a banquet in Dhergabar, tonight, and with the fastest strato-rocket, I'll just barely make it."
"Are you there, Lee?" he heard Alexis Pitov's voice.
"Yes, I'm here. What time is it?" he asked, and then added, "I fell asleep. I was dreaming."

It was all right; he was going to be able to remember. He could still see the slim woman with the graying blonde hair, playing with the little dachshund among the new-fallen leaves on the lawn. He was glad they'd both been in this dream together; these dream-glimpses were all he'd had for the last fifteen years, and they were too precious to lose. He opened his eyes. The Russian was sitting just outside the light from the open door of the bungalow, lighting a cigarette. For a moment, he could see the blocky, high-cheeked face, now pouch and wrinkled, and then the flame went out and there was only the red coal glowing in the darkness. He closed his eyes again, and the dream picture came back to him, the woman catching the little dog and raising her head as though to speak to him.

"Plenty of time, yet." Pitov was speaking German instead of Spanish, as they always did between themselves. "They're still counting down from minus three hours. I just phoned the launching site for a jeep. Eugenio's been there ever since dinner; they say he's running around like a cat looking for a place to have her first litter of kittens."

He chuckled. This would be something new for Eugenio Galvez—for which he could be thankful.

"I hope the generators don't develop any last-second bugs," he said. "We'll only be a mile and a half away, and that'll be too close to fifty kilos of negamatter if the field collapses."

"It'll be all right," Pitov assured him. "The bugs have all been chased out years ago."

"Not out of those generators in the rocket. They're new." He fumbled in his coat pocket for his pipe and tobacco. "I never thought I'd run another nuclear-bomb test, as long as I lived."

"Lee!" Pitov was shocked. "You mustn't call it that. It isn't that, at all. It's purely a scientific experiment."

"Wasn't that all any of them were? We made lots of experiments like this, back before 1969." The memories of all those other tests, each ending in an Everest-high mushroom column, rose in his mind. And the end result—the United States and the Soviet Union blasted to rubble, a whole hemisphere pushed back into the Dark Ages, a quarter of a billion dead. Including a slim woman with graying blonde hair, and a little red dog, and a girl from Odessa whom Alexis Pitov had been going to marry. "Forgive me, Alexis. I just couldn't help remembering. I suppose it's this shot we're going to make, tonight. It's so much like the other ones, before—" He hesitated slightly. "Before the Auburn Bomb."

There; he'd come out and said it. In all the years they'd worked together at the Instituto Argentino de Ciencia Fisica, that had been unmentioned between them. The families of hanged cutthroats avoid mention of ropes and knives. He thumbed the old-fashioned American lighter and held it to his pipe. Across the veranda, in the darkness, he knew that Pitov was looking intently at him.

"You've been thinking about that, lately, haven't you?" the Russian asked, and then, timidly: "Was that what you were dreaming of?"

"Oh, no, thank heaven!"

"I think about it, too, always. I suppose—" He seemed relieved, now that it had been brought out into the open and could be discussed. "You saw it fall, didn't you?"

"That's right. From about thirty miles away. A little closer than we'll be to this shot, tonight. I was in charge of the investigation at Auburn, until we had New York and Washington and Detroit and Mobile and San Francisco to worry about. Then what had happened to Auburn wasn't important, any more. We were trying to get evidence to lay before the United Nations. We kept at it for about twelve hours after the United Nations had ceased to exist."

"I could never understand about that, Lee. I don't know what the truth is; I probably never shall. But I know that my government did not launch that missile. During the first days after yours began coming in, I talked to people who had been in the Kremlin at the time. One had been in the presence of Klyzenko himself when the news of your bombardment arrived. He said that Klyzenko was absolutely stunned. We always believed that your government decided upon a preventive surprise attack, and picked out a town, Auburn, New York, that had been hit by one of our first retaliation missiles, and claimed that it had been hit first."

He shook his head. "Auburn was hit an hour before the first American missile was launched. I know that to be a fact. We could never understand why you launched just that one, and no more until ours began landing on you; why you threw away the advantage of surprise and priority of attack—"

"Because we didn't do it, Lee!" The Russian's voice trembled with earnestness. "You believe me when I tell you that?"

"Yes, I believe you. After all that happened, and all that you, and I, and the people you worked with, and the people I worked with, and your government, and mine, have been guilty of, it would be a waste of breath for either of us to try to lie to the other about what happened fifteen years ago." He drew slowly on his pipe. "But who launched it, then? It had to be launched by somebody."

"Don't you think I've been tormenting myself with that question for the last fifteen years?" Pitov demanded.
"You know, there were people inside the Soviet Union—not many, and they kept themselves well hidden—who were dedicated to the overthrow of the Soviet regime. They, or some of them, might have thought that the devastation of both our countries, and the obliteration of civilization in the Northern Hemisphere, would be a cheap price to pay for ending the rule of the Communist Party."

"Could they have built an ICBM with a thermonuclear warhead in secret?" he asked. "There were also fanatical nationalist groups in Europe, both sides of the Iron Curtain, who might have thought our mutual destruction would be worth the risks involved."

"There was China, and India. If your country and mine wiped each other out, they could go back to the old ways and the old traditions. Or Japan, or the Moslem States. In the end, they all went down along with us, but what criminal ever expects to fall?"

"We have too many suspects, and the trail's too cold, Alexis. That rocket wouldn't have had to have been launched anywhere in the Northern Hemisphere. For instance, our friends here in the Argentine have been doing very well by themselves since El Coloso del Norte went down."

And there were the Australians, picking themselves up bargains in real-estate in the East Indies at gun-point, and there were the Boers, trekking north again, in tanks instead of ox-wagons. And Brazil, with a not-too-implausible pretender to the Braganza throne, calling itself the Portuguese Empire and looking eastward. And, to complete the picture, here were Professor Doctor Lee Richardson and Comrade Professor Alexis Petrovitch Pitov, getting ready to test a missile with a matter-annihilation warhead.

No. This thing just wasn't a weapon.

A jeep came around the corner, lighting the dark roadway between the bungalows, its radio on and counting down—Twenty two minutes. Twenty one fifty nine, fifty eight, fifty seven—It came to a stop in front of their bungalow, at exactly Minus Two Hours, Twenty One Minutes, Fifty Four Seconds. The driver called out in Spanish:

"Doctor Richardson; Doctor Pitov! Are you ready?"

"Yes, ready. We're coming."

They both got to their feet, Richardson pulling himself up reluctantly. The older you get, the harder it is to leave a comfortable chair. He settled himself beside his colleague and former enemy, and the jeep started again, rolling between the buildings of the living-quarters area and out onto the long, straight road across the pampas toward the distant blaze of electric lights.

He wondered why he had been thinking so much, lately, about the Auburn Bomb. He'd questioned, at times, indignantly, of course, whether Russia had launched it—but it wasn't until tonight, until he had heard what Pitov had had to say, that he seriously doubted it. Pitov wouldn't lie about it, and Pitov would have been in a position to have known the truth, if the missile had been launched from Russia. Then he stopped thinking about what was water—or blood—a long time over the dam.

The special policeman at the entrance to the launching site reminded them that they were both smoking; when they extinguished, respectively, their cigarette and pipe, he waved the jeep on and went back to his argument with a carload of tourists who wanted to get a good view of the launching.

"There, now, Lee; do you need anything else to convince you that this isn't a weapon project?" Pitov asked.

"No, now that you mention it. I don't. You know, I don't believe I've had to show an identity card the whole time I've been here."

"I don't believe I have an identity card," Pitov said. "Think of that."

The lights blazed everywhere around them, but mostly about the rocket that towered above everything else, so thick that it seemed squat. The gantry-cranes had been hauled away, now, and it stood alone, but it was still wreathed in thick electric cables. They were pouring enough current into that thing to light half the street-lights in Buenos Aires; when the cables were blown free by separation charges at the blastoff, the generators powered by the rocket-engines had better be able to take over, because if the magnetic field collapsed and that fifty-kilo chunk of negative-proton matter came in contact with natural positive-proton matter, an old-fashioned H-bomb would be a firecracker to what would happen. Just one hundred kilos of pure, two-hundred proof MC2.

The driver took them around the rocket, dodging assorted trucks and mobile machinery that were being hurried out of the way. The countdown was just beyond two hours five minutes. The jeep stopped at the edge of a crowd around three more trucks, and Doctor Eugenio Galvez, the director of the Institute, left the crowd and approached at an awkward half-run as they got down.

"Is everything checked, gentlemen?" he wanted to know.

"It was this afternoon at 1730," Pitov told him. "And nobody's been burning my telephone to report anything different. Are the balloons and the drone planes ready?"

"The Air Force just finished checking; they're ready. Captain Urquiola flew one of the planes over the course and made a guidance-tape; that's been duplicated and all the planes are equipped with copies."
"How's the wind?" Richardson asked.
"Still steady. We won't have any trouble about fallout or with the balloons."
"Then we'd better go back to the bunker and make sure everybody there is on the job."

The loudspeaker was counting down to Two Hours One Minute.

"Could you spare a few minutes to talk to the press?" Eugenio Galvez asked. "And perhaps say a few words for telecast? This last is most important; we can't explain too many times the purpose of this experiment. There is still much hostility, arising from fear that we are testing a nuclear weapon."

The press and telecast services were well represented; there were close to a hundred correspondents, from all over South America, from South Africa and Australia, even one from Ceylon. They had three trucks, with mobile telecast pickups, and when they saw who was approaching, they released the two rocketry experts they had been quizzing and pounced on the new victims.

Was there any possibility that negative-proton matter might be used as a weapon?

"Anything can be used as a weapon; you could stab a man to death with that lead pencil you're using," Pitov replied. "But I doubt if negamatter will ever be so used. We're certainly not working on weapons design here. We started, six years ago, with the ability to produce negative protons, reverse-spin neutrons, and positrons, and the theoretical possibility of assembling them into negamatter. We have just gotten a fifty kilogramme mass of nega-iron assembled. In those six years, we had to invent all our techniques, and design all our equipment. If we'd been insane enough to want to build a nuclear weapon, after what we went through up North, we could have done so from memory, and designed a better--which is to say a worse--one from memory in a few days."

"Yes, and building a negamatter bomb for military purposes would be like digging a fifty foot shaft to get a rock to bash somebody's head in, when you could do the job better with the shovel you're digging with," Richardson added. "The time, money, energy and work we put in on this thing would be ample to construct twenty thermonuclear bombs. And that's only a small part of it." He went on to tell them about the magnetic bottle inside the rocket's warhead, mentioning how much electric current was needed to keep up the magnetic field that insulated the negamatter from contact with posimatter.

"Then what was the purpose of this experiment, Doctor Richardson?"

"Oh, we were just trying to find out a few basic facts about natural structure. Long ago, it was realized that the nucleonic particles--protons, neutrons, mesons and so on--must have structure of their own. Since we started constructing negative-proton matter, we've found out a few things about nucleonic structure. Some rather odd things, including fractions of Planck's constant."

A couple of the correspondents--a man from La Prensa, and an Australian--whistled softly. The others looked blank. Pitov took over:

"You see, gentlemen, most of what we learned, we learned from putting negamatter atoms together. We annihilated a few of them--over there in that little concrete building, we have one of the most massive steel vaults in the world, where we do that--but we assembled millions of them for every one we annihilated, and that chunk of nega-iron inside the magnetic bottle kept growing. And when you have a piece of negamatter you don't want, you can't just throw it out on the scrap-pile. We might have rocketed it into escape velocity and let it blow up in space, away from the Moon or any of the artificial satellites, but why waste it? So we're going to have the rocket eject it, and when it falls, we can see, by our telemetered instruments, just what happens."

"Well, won't it be annihilated by contact with atmosphere?" somebody asked.

"That's one of the things we want to find out," Pitov said. "We estimate about twenty percent loss from contact with atmosphere, but the mass that actually lands on the target area should be about forty kilos. It should be something of a spectacle, coming down."

"You say you had to assemble it, after creating the negative protons and neutrons and the positrons. Doesn't any of this sort of matter exist in nature?"

The man who asked that knew better himself. He just wanted the answer on the record.

"Oh no; not on this planet, and probably not in the Galaxy. There may be whole galaxies composed of nothing but negamatter. There may even be isolated stars and planetary systems inside our Galaxy composed of negamatter, though I think that very improbable. But when negamatter and posimatter come into contact with one another, the result is immediate mutual annihilation."

They managed to get away from the press, and returned as far as the bunkers, a mile and a half away. Before they went inside, Richardson glanced up at the sky, fixing the location of a few of the more conspicuous stars in his mind. There were almost a hundred men and women inside, each at his or her instruments--view-screens, radar indicators, detection instruments of a dozen kinds. The reporters and telecast people arrived shortly afterward, and Eugenio Galvez took them in tow. While Richardson and Pitov were making their last-minute rounds, the countdown progressed past minus one hour, and at minus twenty minutes all the overhead lights went off and the
small instrument operators' lights came on.

Pitov turned on a couple of view-screens, one from a pickup on the roof of the bunker and another from the launching-pad. They sat down side by side and waited. Richardson got his pipe out and began loading it. The loudspeaker was saying: "Minus two minutes, one fifty nine, fifty eight, fifty seven--"

He let his mind drift away from the test, back to the world that had been smashed around his ears in the autumn of 1969. He was doing that so often, now, when he should be thinking about--

"Two seconds, one second. FIRING!"

It was a second later that his eyes focussed on the left hand view-screen. Red and yellow flames were gushing out at the bottom of the rocket, and it was beginning to tremble. Then the upper jets, the ones that furnished power for the generators, began firing. He looked anxiously at the meters; the generators were building up power. Finally, when he was sure that the rocket would be blasting off anyhow, the separator-charges fired and the heavy cables fell away. An instant later, the big missile started inching upward, gaining speed by the second, first slowly and jerkily and then more rapidly, until it passed out of the field of the pickup. He watched the rising spout of fire from the other screen until it passed from sight.

By that time, Pitov had twisted a dial and gotten another view on the left hand screen, this time from close to the target. That camera was radar-controlled; it had fastened onto the approaching missile, which was still invisible. The stars swung slowly across the screen until Richardson recognized the ones he had spotted at the zenith. In a moment, now, the rocket, a hundred miles overhead, would be nosing down, and then the warhead would open and the magnetic field inside would alter and the mass of negamatter would be ejected.

The stars were blotted out by a sudden glow of light. Even at a hundred miles, there was enough atmospheric density to produce considerable energy release. Pitov, beside him, was muttering, partly in German and partly in Russian; most of what Richardson caught was figures. Trying to calculate how much of the mass of unnatural iron would get down for the ground blast. Then the right hand screen broke into a wriggling orgy of color, and at the same time every scrap of radio-transmitted apparatus either went out or began reporting erratically. The left hand screen, connected by wiring to the pickup on the roof, was still functioning. For a moment, Richardson wondered what was going on, and then shocked recognition drove that from his mind as he stared at the ever-brightening glare in the sky.

It was the Auburn Bomb again! He was back, in memory, to the night on the shore of Lake Ontario; the party breaking up in the early hours of morning; he and Janet and the people with whom they had been spending a vacation week standing on the lawn as the guests were getting into their cars. And then the sudden light in the sky. The cries of surprise, and then of alarm as it seemed to be rushing straight down upon them. He and Janet, clutching each other and staring up in terror at the falling blaze from which there seemed no escape. Then relief, as it curved away from them and fell to the south. And then the explosion, lighting the whole southern sky.

There was a similar explosion in the screen, when the mass of nega-iron landed—a sheet of pure white light, so bright and so quick as to almost pass above the limit of visibility, and then a moment's darkness that was in his stunned eyes more than in the screen, and then the rising glow of updrawn incandescent dust.

Before the sound-waves had reached them, he had been legging it into the house. The television had been on, and it had been acting as insanely as the screen on his right now. He had called the State Police--the telephones had been working all right—and told them who he was, and they had told him to stay put and they'd send a car for him. They did, within minutes. Janet and his host and hostess had waited with him on the lawn until it came, and after he had gotten into it, he had turned around and looked back through the rear window, and seen Janet standing under the front light, holding the little dog in her arms, flopping one of its silly little paws up and down with her hand to wave goodbye to him.

He had seen her and the dog like that every day of his life for the last fifteen years.

"What kind of radiation are you getting?" he could hear Alexis Pitov asking into a phone. "What? Nothing else? Oh; yes, of course. But mostly cosmic. That shouldn't last long." He turned from the phone. "A devil's own dose of cosmic, and some gamma. It was the cosmic radiation that put the radios and telescreens out. That's why I insisted that the drone planes be independent of radio control."

They always got cosmic radiation from the micro-annihilations in the test-vault. Well, now they had an idea of what produced natural cosmic rays. There must be quite a bit of negamatter and positamatter going into mutual annihilation and total energy release through the Universe.

"Of course, there were no detectors set up in advance around Auburn," he said. "We didn't really begin to find anything out for half an hour. By that time, the cosmic radiation was over and we weren't getting anything but gamma."

"What--What has Auburn to do--?" The Russian stopped short. "You think this was the same thing?" He gave it a moment's consideration. "Lee, you're crazy! There wasn't an atom of artificial negamatter in the world in 1969.
Nobody had made any before us. We gave each other some scientific surprises, then, but nobody surprised both of us. You and I, between us, knew everything that was going on in nuclear physics in the world. And you know as well as I do—"

A voice came out of the public-address speaker. "Some of the radio equipment around the target area, that wasn't knocked out by blast, is beginning to function again. There is an increasingly heavy gamma radiation, but no more cosmic rays. They were all prompt radiation from the annihilation; the gamma is secondary effect. Wait a moment; Captain Urquiola, of the Air Force, says that the first drone plane is about to take off."

It had been two hours after the blast that the first drones had gone over what had been Auburn, New York. He was trying to remember, as exactly as possible, what had been learned from them. Gamma radiation; a great deal of gamma. But it didn't last long. It had been almost down to a safe level by the time the investigation had been called off, and, two months after there had been no more missiles, and no way of producing more, and no targets to send them against if they'd had them, rather--he had been back at Auburn on his hopeless quest, and there had been almost no trace of radiation. Nothing but a wide, shallow crater, almost two hundred feet in diameter and only fifteen at its deepest, already full of water, and a circle of flattened and scattered rubble for a mile and a half all around it. He was willing to bet anything that that was what they'd find where the chunk of nega-iron had landed, fifty miles away on the pampas.

Well, the first drone ought to be over the target area before long, and at least one of the balloons that had been sent up was reporting its course by radio. The radios in the others were silent, and the recording counters had probably jammed in all of them. There'd be something of interest when the first drone came back. He dragged his mind back to the present, and went to work with Alexis Pitov.

They were at it all night, checking, evaluating, making sure that the masses of data that were coming in were being promptly processed for programming the computers. At each of the increasingly frequent coffee-breaks, he noticed Pitov looking curiously. He said nothing, however, until, long after dawn, they stood outside the bunker, waiting for the jeep that would take them back to their bungalow and watching the line of trucks--Argentine army engineers, locally hired laborers, load after load of prefab-huts and equipment--going down toward the target-area, where they would be working for the next week.

"Lee, were you serious?" Pitov asked. "I mean, about this being like the one at Auburn?"

"It was exactly like Auburn; even that blazing light that came rushing down out of the sky. I wondered about that at the time--what kind of a missile would produce an effect like that. Now I know. We just launched one like it."

"But that's impossible! I told you, between us we know everything that was happening in nuclear physics then. Nobody in the world knew how to assemble atoms of negamatter and build them into masses."

"Nobody, and nothing, on this planet built that mass of negamatter. I doubt if it even came from this Galaxy. But we didn't know that, then. When that negamatter meteor fell, the only thing anybody could think of was that it had been a Soviet missile. If it had hit around Leningrad or Moscow or Kharkov, who would you have blamed it on?"

THE END.

Contents

THE KNIGHTS OF ARTHUR
By Frederik Pohl

With one suitcase as his domain, Arthur was desperately in need of armed henchmen ... for his keys to a kingdom were typewriter keys!

I

There were three of us--I mean if you count Arthur. We split up to avoid attracting attention. Engdahl just came in over the big bridge, but I had Arthur with me so I had to come the long way around.

When I registered at the desk, I said I was from Chicago. You know how it is. If you say you're from Philadelphia, it's like saying you're from St. Louis or Detroit--I mean nobody lives in Philadelphia any more. Shows how things change. A couple years ago, Philadelphia was all the fashion. But not now, and I wanted to make a good impression.

I even tipped the bellboy a hundred and fifty dollars. I said: "Do me a favor. I've got my baggage booby-trapped--"
"Natch," he said, only mildly impressed by the bill and a half, even less impressed by me.

"I mean really booby-trapped. Not just a burglar alarm. Besides the alarm, there's a little surprise on a short fuse. So what I want you to do, if you hear the alarm go off, is come running. Right?"

"And get my head blown off?" He slammed my bags onto the floor. "Mister, you can take your damn money and--"

"Wait a minute, friend." I passed over another hundred. "Please? It's only a shaped charge. It won't hurt anything except anybody who messes around, see? But I don't want it to go off. So you come running when you hear the alarm and scare him away and--"

"No!" But he was less positive. I gave him two hundred more and he said grudgingly: "All right. If I hear it. Say, what's in there that's worth all that trouble?"

"Papers," I lied.

He leered. "Sure."

"No fooling, it's just personal stuff. Not worth a penny to anybody but me, understand? So don't get any ideas--"

He said in an injured tone: "Mister, naturally the staff won't bother your stuff. What kind of a hotel do you think this is?"

"Of course, of course," I said. But I knew he was lying, because I knew what kind of hotel it was. The staff was there only because being there gave them a chance to knock down more money than they could make any other way. What other kind of hotel was there?

Anyway, the way to keep the staff on my side was by bribery, and when he left I figured I had him at least temporarily bought. He promised to keep an eye on the room and he would be on duty for four more hours--which gave me plenty of time for my errands.

* * * * *

I made sure Arthur was plugged in and cleaned myself up. They had water running--New York's very good that way; they always have water running. It was even hot, or nearly hot. I let the shower splash over me for a while, because there was a lot of dust and dirt from the Bronx that I had to get off me. The way it looked, hardly anybody had been up that way since it happened.

I dried myself, got dressed and looked out the window. We were fairly high up--fifteenth floor. I could see the Hudson and the big bridge up north of us. There was a huge cloud of smoke coming from somewhere near the bridge on the other side of the river, but outside of that everything looked normal. You would have thought there were people in all those houses. Even the streets looked pretty good, until you noticed that hardly any of the cars were moving.

I opened the little bag and loaded my pockets with enough money to run my errands. At the door, I stopped and called over my shoulder to Arthur: "Don't worry if I'm gone an hour or so. I'll be back."

I didn't wait for an answer. That would have been pointless under the circumstances.

After Philadelphia, this place seemed to be bustling with activity. There were four or five people in the lobby and a couple of dozen more out in the street.

I tarried at the desk for several reasons. In the first place, I was expecting Vern Engdahl to try to contact me and I didn't want him messing with the luggage--not while Arthur might get nervous. So I told the desk clerk that in case anybody came inquiring for Mr. Schlaepfer, which was the name I was using--my real name being Sam Dunlap--he was to be told that on no account was he to go to my room but to wait in the lobby; and in any case I would be back in an hour.

"Sure," said the desk clerk, holding out his hand.

I crossed it with paper. "One other thing," I said. "I need to buy an electric typewriter and some other stuff. Where can I get them?"

"PX," he said promptly.

"PX?"

"What used to be Macy's," he explained. "You go out that door and turn right. It's only about a block. You'll see the sign."

"Thanks." That cost me a hundred more, but it was worth it. After all, money wasn't a problem--not when we had just come from Philadelphia.

* * * * *

The big sign read "PX," but it wasn't big enough to hide an older sign underneath that said "Macy's." I looked it over from across the street.

Somebody had organized it pretty well. I had to admire them. I mean I don't like New York--wouldn't live there if you gave me the place--but it showed a sort of go-getting spirit. It was no easy job getting a full staff together to
run a department store operation, when any city the size of New York must have a couple thousand stores. You know what I mean? It's like running a hotel or anything else--how are you going to get people to work for you when they can just as easily walk down the street, find a vacant store and set up their own operation?

But Macy's was fully manned. There was a guard at every door and a walking patrol along the block-front between the entrances to make sure nobody broke in through the windows. They all wore green armbands and uniforms--well, lots of people wore uniforms.

I walked over.

"Afternoon," I said affably to the guard. "I want to pick up some stuff. Typewriter, maybe a gun, you know. How do you work it here? Flat rate for all you can carry, prices marked on everything, or what is it?"

He stared at me suspiciously. He was a monster; six inches taller than I, he must have weighed two hundred and fifty pounds. He didn't look very smart, which might explain why he was working for somebody else these days. But he was smart enough for what he had to do.

He demanded: "You new in town?"

I nodded.

He thought for a minute. "All right, buddy. Go on in. You pick out what you want, see? We'll straighten out the price when you come out."

"Fair enough." I started past him.

He grabbed me by the arm. "No tricks," he ordered. "You come out the same door you went in, understand?"

"Sure," I said, "if that's the way you want it."

That figured--one way or another: either they got a commission, or, like everybody else, they lived on what they could knock down. I filed that for further consideration.

Inside, the store smelled pretty bad. It wasn't just rot, though there was plenty of that; it was musty and stale and old. It was dark, or nearly. About one light in twenty was turned on, in order to conserve power. Naturally the escalators and so on weren't running at all.

* * * * *

I passed a counter with pencils and ball-point pens in a case. Most of them were gone--somebody hadn't bothered to go around in back and had simply knocked the glass out--but I found one that worked and an old order pad to write on. Over by the elevators there was a store directory, so I went over and checked it, making a list of the departments worth visiting.

Office Supplies would be the typewriter. Garden & Home was a good bet--maybe I could find a little wheelbarrow to save carrying the typewriter in my arms. What I wanted was one of the big ones where all the keys are solenoid-operated instead of the cam-and-roller arrangement--that was all Arthur could operate. And those things were heavy, as I knew. That was why we had ditched the old one in the Bronx.

Sporting Goods--that would be for a gun, if there were any left. Naturally, they were about the first to go after it happened, when everybody wanted a gun. I mean everybody who lived through it. I thought about clothes--it was pretty hot in New York--and decided I might as well take a look.

Typewriter, clothes, gun, wheelbarrow. I made one more note on the pad--try the tobacco counter, but I didn't have much hope for that. They had used cigarettes for currency around this area for a while, until they got enough bank vaults open to supply big bills. It made cigarettes scarce.

I turned away and noticed for the first time that one of the elevators was stopped on the main floor. The doors were closed, but they were glass doors, and although there wasn't any light inside, I could see the elevator was full. There must have been thirty or forty people in the car when it happened.

I'd been thinking that, if nothing else, these New Yorkers were pretty neat--I mean if you don't count the Bronx. But here were thirty or forty skeletons that nobody had even bothered to clear away.

You call that neat? Right in plain view on the ground floor, where everybody who came into the place would be sure to go--I mean if it had been on one of the upper floors, what difference would it have made?

I began to wish we were out of the city. But naturally that would have to wait until we finished what we came here to do--otherwise, what was the point of coming all the way here in the first place?

* * * * *

The tobacco counter was bare. I got the wheelbarrow easily enough--there were plenty of those, all sizes; I picked out a nice light red-and-yellow one with rubber-tired wheel. I rolled it over to Sporting Goods on the same floor, but that didn't work out too well. I found a 30-30 with telescopic sights, only there weren't any cartridges to fit it--or anything else. I took the gun anyway; Engdahl would probably have some extra ammunition.

Men's Clothing was a waste of time, too--I guess these New Yorkers were too lazy to do laundry. But I found the typewriter I wanted.

I put the whole load into the wheelbarrow, along with a couple of odds and ends that caught my eye as I passed
through Housewares, and I bumped as gently as I could down the shallow steps of the motionless escalator to the
ground floor.

I came down the back way, and that was a mistake. It led me right past the food department. Well, I don't have
to tell you what that was like, with all the exploded cans and the rats as big as poodles. But I found some cologne
and soaked a handkerchief in it, and with that over my nose, and some fast footwork for the rats, I managed to get to
one of the doors.

It wasn't the one I had come in, but that was all right. I sized up the guard. He looked smart enough for a little
bargaining, but not too smart; and if I didn't like his price, I could always remember that I was supposed to go out
the other door.

I said: "Psst!"

When he turned around, I said rapidly: "Listen, this isn't the way I came in, but if you want to do business, it'll
be the way I come out."

He thought for a second, and then he smiled craftily and said: "All right, come on."

Well, we haggled. The gun was the big thing—he wanted five thousand for that and he wouldn't come down.
The wheelbarrow he was willing to let go for five hundred. And the typewriter—he scowled at the typewriter as
though it were contagious.

"What you want that for?" he asked suspiciously. I shrugged.

"Well--" he scratched his head--"a thousand?"

I shook my head.

"Five hundred?"

I kept on shaking.

"All right, all right," he grumbled. "Look, you take the other things for six thousand—including what you got in
your pockets that you don't think I know about, see? And I'll throw this in. How about it?"

That was fine as far as I was concerned, but just on principle I pushed him a little further. "Forget it," I said.
"I'll give you fifty bills for the lot, take it or leave it. Otherwise I'll walk right down the street to Gimbel's and--"

He guffawed.

"What's the matter?" I demanded.

"Pal," he said, "you kill me. Stranger in town, hey? You can't go anywhere but here."

"Why not?"

"Account of there ain't anyplace else. See, the chief here don't like competition. So we don't have to worry
about anybody taking their trade elsewhere, like—we burned all the other places down."

That explained a couple of things. I counted out the money, loaded the stuff back in the wheelbarrow and
headed for the Statler; but all the time I was counting and loading, I was talking to Big Brainless; and by the time I
was actually on the way, I knew a little more about this "chief."

And that was kind of important, because he was the man we were going to have to know very well.

I locked the door of the hotel room. Arthur was peeping out of the suitcase at me.

I said: "I'm back. I got your typewriter." He waved his eye at me.

I took out the little kit of electrician's tools I carried, tipped the typewriter on its back and began sorting out
leads. I cut them free from the keyboard, soldered on a ground wire, and began taping the leads to the strands of a
yard of forty-ply multiplex cable.

It was a slow and dull job. I didn't have to worry about which solenoid lead went to which strand—Arthur could
sort them out. But all the same it took an hour, pretty near, and I was getting hungry by the time I got the last
connection taped. I shifted the typewriter so that both Arthur and I could see it, rolled in a sheet of paper and hooked
the cable to Arthur's receptors.

Nothing happened.

"Oh," I said. "Excuse me, Arthur. I forgot to plug it in."

I found a wall socket. The typewriter began to hum and then it started to rattle and type:

DURA AUK UKOO RQK MWS AQB

It stopped.

"Come on, Arthur," I ordered impatiently. "Sort them out, will you?"

Laboriously it typed:

!!!

Then, for a time, there was a clacking and thumping as he typed random letters, peeping out of the suitcase to
see what he had typed, until the sheet I had put in was used up.

I replaced it and waited, as patiently as I could, smoking one of the last of my cigarettes. After fifteen minutes
or so, he had the hang of it pretty well. He typed:

YOU DAMN FOOL WHUXX WHY DID YOU LEAQM XXXX WANT ME ALONE Q Q

"Aw, Arthur," I said. "Use your head, will you? I couldn't carry that old typewriter of yours all the way down through the Bronx. It was getting pretty beat-up. Anyway, I've only got two hands--"

YOU LOUSE, it rattled, ARE YOU TRYONXXX TRYING TO INSULT ME BECAUSE I DONT HAVE ANY Q Q

"Arthur!" I said, shocked. "You know better than that!"

The typewriter slammed its carriage back and forth ferociously a couple of times. Then he said: ALL RIGHT SAM YOU KNOW YOUVE GOT ME BY THE throat SO YOU CAN DO ANYTHING YOU WANT TO WITH ME WHO CARES ABOUT MY FEELINGS ANYHOW

"Please don't take that attitude," I coaxed.

WELL

"Please?"

He capitulated. ALL RIGHT SAY HEARD ANYTHING FROM ENGDALH Q Q

"No."

ISNT THAT JUST LIKE HIM Q Q CANT DEPEND ON THAT MAN HE WAS THE LOUSIEST ELECTRICIANS MATE ON THE SEA SPRITE AND HE ISNT MUCH BETTER NOW SAY SAM REMEMBER WHEN WE HAD TO GET HIM OUT OF THE JUG IN NEWPORT NEWS BECAUSE

I settled back and relaxed. I might as well. That was the trouble with getting Arthur a new typewriter after a couple of days without one--he had so much garrulity stored up in his little brain, and the only person to spill it on was me.

* * * *

Apparently I fell asleep. Well, I mean I must have, because I woke up. I had been dreaming I was on guard post outside the Yard at Portsmouth, and it was night, and I looked up and there was something up there, all silvery and bad. It was a missile--and that was silly, because you never see a missile. But this was a dream.

And the thing burst, like a Roman candle flaring out, all sorts of comet-trails of light, and then the whole sky was full of bright and colored snow. Little tiny flakes of light coming down, a mist of light, radiation dropping like dew; and it was so pretty, and I took a deep breath. And my lungs burned out like slow fire, and I coughed myself to death with the explosions of the missile banging against my flaming ears....

Well, it was a dream. It probably wasn't like that at all--and if it had been, I wasn't there to see it, because I was tucked away safe under a hundred and twenty fathoms of Atlantic water. All of us were on the Sea Sprite.

But it was a bad dream and it bothered me, even when I woke up and found that the banging explosions of the missile were the noise of Arthur's typewriter carriage crashing furiously back and forth.

He peeped out of the suitcase and saw that I was awake. He demanded: HOW CAN YOU FALL ASLEEP WHEN WERE IN A PLACE LIKE THIS Q Q ANYTHING COULD HAPPEN SAM I KNOW YOU DONT CARE WHAT HAPPENS TO ME BUT FOR YOUR OWN SAKE YOU SHOULDN'T

"Oh, dry up," I said.

Being awake, I remembered that I was hungry. There was still no sign of Engdahl or the others, but that wasn't too surprising--they hadn't known exactly when we would arrive. I wished I had thought to bring some food back to the room. It looked like long waiting and I wouldn't want to leave Arthur alone again--after all, he was partly right.

I thought of the telephone.

On the off-chance that it might work, I picked it up. Amazing, a voice from the desk answered.

I crossed my fingers and said: "Room service?"

And the voice answered amiably enough: "Hold on, buddy. I'll see if they answer."

Clicking and a good long wait. Then a new voice said: "Whaddya want?"

There was no sense pressing my luck by asking for anything like a complete meal. I would be lucky if I got a sandwich.

I said: "Please, may I have a Spam sandwich on Rye Krisp and some coffee for Room Fifteen Forty-one?"

"Please, you go to hell!" the voice snarled. "What do you think this is, some damn delicatessen? You want liquor, we'll get you liquor. That's what room service is for!"

* * * *

I hung up. What was the use of arguing? Arthur was clacking peevishly:

WHATS THE MATTER SAM YOU THINKING OF YOUR BELLY AGAIN Q Q

"You would be if you--" I started, and then I stopped. Arthur's feelings were delicate enough already. I mean suppose that all you had left of what you were born with was a brain in a kind of sardine can, wouldn't you be sensitive? Well, Arthur was more sensitive than you would be, believe me. Of course, it was his own foolish fault--I
mean you don't get a prosthetic tank unless you die by accident, or something like that, because if it's disease they usually can't save even the brain.

The phone rang again.
It was the desk clerk. "Say, did you get what you wanted?" he asked chummily.
"No."
"Oh. Too bad," he said, but cheerfully. "Listen, buddy, I forgot to tell you before. That Miss Engdahl you were expecting, she's on her way up."
I dropped the phone onto the cradle.
"Arthur!" I yelled. "Keep quiet for a while--trouble!"
He clacked once, and the typewriter shut itself off. I jumped for the door of the bathroom, cursing the fact that I didn't have cartridges for the gun. Still, empty or not, it would have to do.

I ducked behind the bathroom door, in the shadows, covering the hall door. Because there were two things wrong with what the desk clerk had told me. Vern Engdahl wasn't a "miss," to begin with; and whatever name he used when he came to call on me, it wouldn't be Vern Engdahl.

There was a knock on the door. I called: "Come in!"
The door opened and the girl who called herself Vern Engdahl came in slowly, looking around. I stayed quiet and out of sight until she was all the way in. She didn't seem to be armed; there wasn't anyone with her.
I stepped out, holding the gun on her. Her eyes opened wide and she seemed about to turn.
"Hold it! Come on in, you. Close the door!"
She did. She looked as though she were expecting me. I looked her over--medium pretty, not very tall, not very plump, not very old. I'd have guessed twenty or so, but that's not my line of work; she could have been almost any age from seventeen on.

The typewriter switched itself on and began to pound agitatedly. I crossed over toward her and paused to peer at what Arthur was yacking about: SEARCH HER YOU DAMN FOOL MAYBE SHES GOT A GUN
I ordered: "Shut up, Arthur. I'm going to search her. You! Turn around!"
* * * * *
She shrugged and turned around, her hands in the air. Over her shoulder, she said: "You're taking this all wrong, Sam. I came here to make a deal with you."
"Sure you did."
But her knowing my name was a blow, too. I mean what was the use of all that sneaking around if people in New York were going to know we were here?
I walked up close behind her and patted what there was to pat. There didn't seem to be a gun.
"You tickle," she complained.
I took her pocketbook away from her and went through it. No gun. A lot of money--an awful lot of money. I mean there must have been two or three hundred thousand dollars. There was nothing with a name on it in the pocketbook.
She said: "Can I put my hands down, Sam?"
"In a minute." I thought for a second and then decided to do it--you know, I just couldn't afford to take chances.
I cleared my throat and ordered: "Take off your clothes."
Her head jerked around and she stared at me. "What?"
"Take them off. You heard me."
"Now wait a minute--" she began dangerously.
I said: "Do what I tell you, hear? How do I know you haven't got a knife tucked away?"
She clenched her teeth. "Why, you dirty little man! What do you think--" Then she shrugged. She looked at me with contempt and said: "All right. What's the difference?"
Well, there was a considerable difference. She began to unzip and unbutton and wriggle, and pretty soon she was standing there in her underwear, looking at me as though I were a two-headed worm. It was interesting, but kind of embarrassing. I could see Arthur's eye-stalk waving excitedly out of the opened suitcase.
I picked up her skirt and blouse and shook them. I could feel myself blushing, and there didn't seem to be anything in them.
I growled: "Okay, I guess that's enough. You can put your clothes back on now."
"Gee, thanks," she said.
She looked at me thoughtfully and then shook her head as if she'd never seen anything like me before and never hoped to again. Without another word, she began to get back into her clothes. I had to admire her poise. I mean she was perfectly calm about the whole thing. You'd have thought she was used to taking her clothes off in front of strange men.
Well, for that matter, maybe she was; but it wasn't any of my business.

* * * * *

Arthur was clacking distractedly, but I didn't pay any attention to him. I demanded: "All right, now who are you and what do you want?"

She pulled up a stocking and said: "You couldn't have asked me that in the first place, could you? I'm Vern Eng--"

"Cut it out!"

She stared at me. "I was only going to say I'm Vern Engdahl's partner. We've got a little business deal cooking and I wanted to talk to you about this proposition."

Arthur squawked: WHATS ENGDAHL UP TO NOW Q Q SAM IM WARNING YOU I DONT LIKE THE LOOK OF THIS THIS WOMAN AND ENGDAHL ARE PROBABLY DOUBLECROSSING US

I said: "All right, Arthur, relax. I'm taking care of things. Now start over, you. What's your name?"

She finished putting on her shoe and stood up. "Amy."

"Last name?"

She shrugged and fished in her purse for a cigarette. "What does it matter? Mind if I sit down?"

"Go ahead," I rumbled. "But don't stop talking!"

"Oh," she said, "we've got plenty of time to straighten things out." She lit the cigarette and walked over to the chair by the window. On the way, she gave the luggage a good long look.

Arthur's eyestalk cowered back into the suitcase as she came close. She winked at me, grinned, bent down and peered inside.

"My," she said, "he's a nice shiny one, isn't he?"

The typewriter began to clatter frantically. I didn't even bother to look; I told him: "Arthur, if you can't keep quiet, you have to expect people to know you're there."

She sat down and crossed her legs. "Now then," she said. "Frankly, he's what I came to see you about. Vern told me you had a pross. I want to buy it."

The typewriter thrashed its carriage back and forth furiously. "Arthur isn't for sale."

"No?" She leaned back. "Vern's already sold me his interest, you know. And you don't really have any choice. You see, I'm in charge of materiel procurement for the Major. If you want to sell your share, fine. If you don't, why, we requisition it anyhow. Do you follow?"

I was getting irritated--at Vern Engdahl, for whatever the hell he thought he was doing; but at her because she was handy. I shook my head.

"Fifty thousand dollars? I mean for your interest?"

"No."

"Seventy-five?"

"No!"

"Oh, come on now. A hundred thousand?"

It wasn't going to make any impression on her, but I tried to explain: "Arthur's a friend of mine. He isn't for sale."

* * * * *

She shook her head. "What's the matter with you? Engdahl wasn't like this. He sold his interest for forty thousand and was glad to get it."

Clatter-clatter-clatter from Arthur. I didn't blame him for having hurt feelings that time.

Amy said in a discouraged tone: "Why can't people be reasonable? The Major doesn't like it when people aren't reasonable."

I lowered the gun and cleared my throat. "He doesn't?" I asked, cuing her. I wanted to hear more about this Major, who seemed to have the city pretty well under his thumb.

"No, he doesn't." She shook her head sorrowfully. She said in an accusing voice: "You out-of-towners don't know what it's like to try to run a city the size of New York. There are fifteen thousand people here, do you know that? It isn't one of your hick towns. And it's worry, worry, worry all the time, trying to keep things going."

"I bet," I said sympathetically. "You're, uh, pretty close to the Major?"

She said stiffly: "I'm not married to him, if that's what you mean. Though I've had my chances.... But you see how it is. Fifteen thousand people to run a place the size of New York! It's forty men to operate the power station, and twenty-five on the PX, and thirty on the hotel here. And then there are the local groceries, and the Army, and the Coast Guard, and the Air Force--though, really, that's only two men--and--Well, you get the picture."

"I certainly do. Look, what kind of a guy is the Major?"
She shrugged. "A guy."
"I mean what does he like?"
"Women, mostly," she said, her expression clouded. "Come on now. What about it?"
I stalled. "What do you want Arthur for?"
She gave me a disgusted look. "What do you think? To relieve the manpower shortage, naturally. There's more work than there are men. Now if the Major could just get hold of a couple of prosthetics, like this thing here, why, he could put them in the big installations. This one used to be an engineer or something, Vern said."
"Well ... like an engineer."

Amy shrugged. "So why couldn't we connect him up with the power station? It's been done. The Major knows that--he was in the Pentagon when they switched all the aircraft warning net over from computer to prosthetic control. So why couldn't we do the same thing with our power station and release forty men for other assignments? This thing could work day, night, Sundays--what's the difference when you're just a brain in a sardine can?"

Clatter-rattle-bang.
She looked startled. "Oh. I forgot he was listening."
"No deal," I said.
She said: "A hundred and fifty thousand?"
A hundred and fifty thousand dollars. I considered that for a while. Arthur clattered waringly.
"Well," I temporized, "I'd have to be sure he was getting into good hands--"
The typewriter thrashed wildly. The sheet of paper fluttered out of the carriage. He'd used it up. Automatically I picked it up--it was covered with imprecations, self-pity and threats--and started to put a new one in.
"No," I said, bending over the typewriter, "I guess I couldn't sell him. It just wouldn't be right--"
That was my mistake; it was the wrong time for me to say that, because I had taken my eyes off her.
The room bent over and clouted me.
I half turned, not more than a fraction conscious, and I saw this Amy girl, behind me, with the shoe still in her hand, raised to give me another blackjacking on the skull.
The shoe came down, and it must have weighed more than it looked, and even the fractional bit of consciousness went crashing away.

III
I have to tell you about Vern Engdahl. We were all from the Sea Sprite, of course--me and Vern and even Arthur. The thing about Vern is that he was the lowest-ranking one of us all--only an electricians' mate third, I mean when anybody paid any attention to things like that--and yet he was pretty much doing the thinking for the rest of us. Coming to New York was his idea--he told us that was the only place we could get what we wanted.
Well, as long as we were carrying Arthur along with us, we pretty much needed Vern, because he was the one who knew how to keep the lash-up going. You've got no idea what kind of pumps and plumbing go into a prosthetic tank until you've seen one opened up. And, naturally, Arthur didn't want any breakdowns without somebody around to fix things up.
The Sea Sprite, maybe you know, was one of the old liquid-sodium-reactor subs--too slow for combat duty, but as big as a barn, so they made it a hospital ship. We were cruising deep when the missiles hit, and, of course, when we came up, there wasn't much for a hospital ship to do. I mean there isn't any sense fooling around with anybody who's taken a good deep breath of fallout.
So we went back to Newport News to see what had happened. And we found out what had happened. And there wasn't anything much to do except pay off the crew and let them go. But us three stuck together. Why not? It wasn't as if we had any families to go back to any more.
Vern just loved all this stuff--he'd been an Eagle Scout; maybe that had something to do with it--and he showed us how to boil drinking water and forage in the woods and all like that, because nobody in his right mind wanted to go near any kind of a town, until the cold weather set in, anyway. And it was always Vern, Vern, telling us what to do, ironing out our troubles.
It worked out, except that there was this one thing. Vern had bright ideas. But he didn't always tell us what they were.
So I wasn't so very surprised when I came to. I mean there I was, tied up, with this girl Amy standing over me, holding the gun like a club. Evidently she'd found out that there weren't any cartridges. And in a couple of minutes there was a knock on the door, and she yelled, "Come in," and in came Vern. And the man who was with him had to be somebody important, because there were eight or ten other men crowding in close behind.
I didn't need to look at the oak leaves on his shoulders to realize that here was the chief, the fellow who ran this town, the Major.
It was just the kind of thing Vern would do.

* * * * *

Vern said, with the look on his face that made strange officers wonder why this poor persecuted man had been forced to spend so much time in the brig: "Now, Major, I'm sure we can straighten all this out. Would you mind leaving me alone with my friend here for a moment?"

The Major teetered on his heels, thinking. He was a tall, youngish-bald type, with a long, worried, horselike face. He said: "Ah, do you think we should?"

"I guarantee there'll be no trouble, Major," Vern promised.

The Major pulled at his little mustache. "Very well," he said. "Amy, you come along."

"We'll be right here, Major," Vern said reassuringly, escorting him to the door.

"You bet you will," said the Major, and tittered. "Ah, bring that gun along with you, Amy. And be sure this man knows that we have bullets."

They closed the door. Arthur had been cowering in his suitcase, but now his eyestalk peeped out and the rattling and clattering from that typewriter sounded like the Battle of the Bulge.

I demanded: "Come on, Vern. What's this all about?"

Vern said: "How much did they offer you?"

Clatter-bang-BANG. I peeked, and Arthur was saying: "WARNED YOU SAM THAT ENGDAHL WAS UP TO TRICKS PLEASE SAM PLEASE PLEASE PLEASE HIT HIM ON THE HEAD KNOCK HIM OUT HE MUST HAVE A GUN SO GET IT AND SHOOT OUR WAY OUT OF HERE"

"A hundred and fifty thousand dollars," I said.

Vern looked outraged. "I only got forty!"

Arthur clattered: "VERN I APPEAL TO YOUR COMMON DECENCY WERE OLD SHIPMATES VERN REMEMBER ALL THE TIMES I"

"Still," Vern mused, "it's all common funds anyway, right? Arthur belongs to both of us."

I DONT DONT DONT REPEAT DONT BELONG TO ANYBODY BUT ME "That's true," I said grudgingly. "But I carried him, remember."

SAM WHATS THE MATTER WITH YOU Q Q I DONT LIKE THE EXPRESSION ON YOUR FACE LISTEN SAM YOU ARENT Vern said, "A hundred and fifty thousand, remember." THINKING OF SELLING "And of course we couldn't get out of here," Vern pointed out. "They've got us surrounded."

ME TO THESE RATS Q Q SAM VERN PLEASE DONT SCARE ME * * * * *

I said, pointing to the fluttering paper in the rattling machine: "You're worrying our friend."

Vern shrugged impatiently.

I KNEW I SHOULDN'T HAVE TRUSTED YOU, Arthur wept. THATS ALL I MEAN TO YOU EH Vern said: "Well, Sam? Let's take the cash and get this thing over with. After all, he will have the best of treatment."

"All right," I said.

It was a little like selling your sister into white slavery, but what else was there to do? Besides, I kind of trusted Vern.

"All right," I said.

What Arthur said nearly scorched the paper.

Vern helped pack Arthur up for moving. I mean it was just a matter of pulling the plugs out and making sure he had a fresh battery, but Vern wanted to supervise himself. Because one of the little things Vern had up his sleeve was that he had found a spot for himself on the Major's payroll. He was now the official Prosthetic (Human) Maintenance Department Chief.

The Major said to me: "Ah, Dunlap. What sort of experience have you had?"

"Experience?"

"In the Navy. Your friend Engdahl suggested you might want to join us here."

"Oh. I see what you mean." I shook my head. "Nothing that would do you any good, I'm afraid. I was a yeoman."

"Yeoman?"

"Like a company clerk," I explained. "I mean I kept records and cut orders and made out reports and all like that."

"Company clerk!" The eyes in the long horsy face gleamed. "Ah, you're mistaken, Dunlap! Why, that's just what we need. Our morning reports are in foul shape. Foul! Come over to HQ. Lieutenant Bankhead will give you a
"Lieutenant Bankhead?"

I got an elbow in my ribs for that. It was that girl Amy, standing alongside me. "I," she said, "am Lieutenant Bankhead."

Well, I went along with her, leaving Engdahl and Arthur behind. But I must admit I wasn't sure of my reception.

Out in front of the hotel was a whole fleet of cars--three or four of them, at least. There was a big old Cadillac that looked like a gangsters' car--thick glass in the windows, tires that looked like they belonged on a truck. I was willing to bet it was bulletproof and also that it belonged to the Major. I was right both times. There was a little MG with the top down, and a couple of light trucks. Every one of them was painted bright orange, and every one of them had the star-and-bar of the good old United States Army on its side.

It took me back to old times--all but the unmilitary color. Amy led me to the MG and pointed.

"Sit," she said.

I sat. She got in the other side and we were off.

It was a little uncomfortable on account of I wasn't just sure whether I ought to apologize for making her take her clothes off. And then she tramped on the gas of that little car and I didn't think much about being embarrassed or about her black lace lingerie. I was only thinking about one thing--how to stay alive long enough to get out of that car.

IV

See, what we really wanted was an ocean liner.

The rest of us probably would have been happy enough to stay in Lehigh County, but Arthur was getting restless.

He was a terrible responsibility, in a way. I suppose there were a hundred thousand people or so left in the country, and not more than forty or fifty of them were like Arthur--I mean if you want to call a man in a prosthetic tank a "person." But we all did. We'd got pretty used to him. We'd shipped together in the war--and survived together, as a few of the actual fighters did, those who were lucky enough to be underwater or high in the air when the ICBMs landed--and as few civilians did.

I mean there wasn't much chance for surviving, for anybody who happened to be breathing the open air when it happened. I mean you can do just so much about making a "clean" H-bomb, and if you cut out the long-life fission products, the short-life ones get pretty deadly.

Anyway, there wasn't much damage, except of course that everybody was dead. All the surface vessels lost their crews. All the population of the cities were gone. And so then, when Arthur slipped on the gangplank coming into Newport News and broke his fool neck, why, we had the whole staff of the Sea Sprite to work on him. I mean what else did the surgeons have to do?

Of course, that was a long time ago.

But we'd stayed together. We headed for the farm country around Allentown, Pennslyvania, because Arthur and Vern Engdahl claimed to know it pretty well. I think maybe they had some hope of finding family or friends, but naturally there wasn't any of that. And when you got into the inland towns, there hadn't been much of an attempt to clean them up. At least the big cities and the ports had been gone over, in some spots anyway, by burial squads. Although when we finally decided to move out and went to Philadelphia--

Well, let's be fair; there had been fighting around there after the big fight. Anyway, that wasn't so very uncommon. That was one of the reasons that for a long time--four or five years, at any rate--we stayed away from big cities.

We holed up in a big farmhouse in Lehigh County. It had its own generator from a little stream, and that took care of Arthur's power needs; and the previous occupants had been just crazy about stashing away food. There was enough to last a century, and that took care of the two of us. We appreciated that. We even took the old folks out and gave them a decent burial. I mean they'd all been in the family car, so we just had to tow it to a gravel pit and push it in.

The place had its own well, with an electric pump and a hot-water system--oh, it was nice. I was sorry to leave but, frankly, Arthur was driving us nuts.

We never could make the television work--maybe there weren't any stations near enough. But we pulled in a couple of radio stations pretty well and Arthur got a big charge out of listening to them--see, he could hear four or five at a time and I suppose that made him feel better than the rest of us.

He heard that the big cities were cleaned up and every one of them seemed to want immigrants--they were pleading, pleading all the time, like the TV-set and vacuum-cleaner people used to in the old days; they guaranteed we'd like it if we only came to live in Philly, or Richmond, or Baltimore, or wherever. And I guess Arthur kind of
hoped we might find another pros. And then--well, Engdahl came up with this idea of an ocean liner.

It figured. I mean you get out in the middle of the ocean and what's the difference what it's like on land? And it especially appealed to Arthur because he wanted to do some surface sailing. He never had when he was real--I mean when he had arms and legs like anybody else. He'd gone right into the undersea service the minute he got out of school.

And--well, sailing was what Arthur knew something about and I suppose even a prosthetic man wants to feel useful. It was like Amy said: He could be hooked up to an automated factory--

Or to a ship.

* * * * *

HQ for the Major's Temporary Military Government--that's what the sign said--was on the 91st floor of the Empire State Building, and right there that tells you something about the man. I mean you know how much power it takes to run those elevators all the way up to the top? But the Major must have liked being able to look down on everybody else.

Amy Bankhead conducted me to his office and sat me down to wait for His Military Excellency to arrive. She filled me in on him, to some degree. He'd been an absolute nothing before the war; but he had a reserve commission in the Air Force, and when things began to look sticky, they'd called him up and put him in a Missile Master control point, underground somewhere up around Ossining.

He was the duty officer when it happened, and naturally he hadn't noticed anything like an enemy aircraft, and naturally the anti-missile missiles were still rusting in their racks all around the city; but since the place had been operating on sealed ventilation, the duty complement could stay there until the short half-life radioisotopes wore themselves out.

And then the Major found out that he was not only in charge of the fourteen men and women of his division at the center--he was ranking United States Military Establishment officer farther than the eye could see. So he beat it, fast as he could, for New York, because what Army officer doesn't dream about being stationed in New York? And he set up his Temporary Military Government--and that was nine years ago.

If there hadn't been plenty to go around, I don't suppose he would have lasted a week--none of these city chiefs would have. But as things were, he was in on the ground floor, and as newcomers trickled into the city, his boys already had things nicely organized.

It was a soft touch.

* * * * *

Well, we were about a week getting settled in New York and things were looking pretty good. Vern calmed me down by pointing out that, after all, we had to sell Arthur, and hadn't we come out of it plenty okay?

And we had. There was no doubt about it. Not only did we have a fat price for Arthur, which was useful because there were a lot of things we would have to buy, but we both had jobs working for the Major.

Vern was his specialist in the care and feeding of Arthur and I was his chief of office routine--and, as such, I delighted his fussy little soul, because by adding what I remembered of Navy protocol to what he was able to teach me of Army routine, we came up with as snarled a mass of red tape as any field-grade officer in the whole history of all armed forces had been able to accumulate. Oh, I tell you, nobody sneezed in New York without a report being made out in triplicate, with eight endorsements.

Of course there wasn't anybody to send them to, but that didn't stop the Major. He said with determination: "Nobody's ever going to chew me out for non-compliance with regulations--even if I have to invent the regulations myself!"

We set up in a bachelor apartment on Central Park South--the Major had the penthouse; the whole building had been converted to barracks--and the first chance we got, Vern snaffled some transportation and we set out to find an ocean liner.

See, the thing was that an ocean liner isn't easy to steal. I mean we'd scouted out the lay of the land before we ever entered the city itself, and there were plenty of liners, but there wasn't one that looked like we could just jump in and sail it away. For that we needed an organization. Since we didn't have one, the best thing to do was borrow the Major's.

Vern turned up with Amy Bankhead's MG, and he also turned up with Amy. I can't say I was displeased, because I was beginning to like the girl; but did you ever try to ride three people in the seats of an MG? Well, the way to do it is by having one passenger sit in the other passenger's lap, which would have been all right except that Amy insisted on driving.

We headed downtown and over to the West Side. The Major's Topographical Section--one former billboard artist--had prepared road maps with little red-ink Xs marking the streets that were blocked, which was most of the streets; but we charted a course that would take us where we wanted to go. Thirty-fourth Street was open, and so
was Fifth Avenue all of its length, so we scooted down Fifth, crossed over, got under the Elevated Highway and
whined along uptown toward the Fifties.

"There's one," cried Amy, pointing.

I was on Vern's lap, so I was making the notes. It was a Fruit Company combination passenger-freighter vessel.
I looked at Vern, and Vern shrugged as best he could, so I wrote it down; but it wasn't exactly what we wanted. No,
not by a long shot.

* * * * *

Still, the thing to do was to survey our resources, and then we could pick the one we liked best. We went all the
way up to the end of the big-ship docks, and then turned and came back down, all the way to the Battery. It wasn't
pleasure driving, exactly--half a dozen times we had to get out the map and detour around impenetrable jams of
stalled and empty cars--or anyway, if they weren't exactly empty, the people in them were no longer in shape to get
out of our way. But we made it.

We counted sixteen ships in dock that looked as though they might do for our purposes. We had to rule out the
newer ones and the reconverted jobs. I mean, after all, U-235 just lasts so long, and you can steam around the world
on a walnut-shell of it, or whatever it is, but you can't store it. So we had to stick with the ships that were powered
with conventional fuel--and, on consideration, only oil at that.

But that left sixteen, as I say. Some of them, though, had suffered visibly from being left untended for nearly a
decade, so that for our purposes they might as well have been abandoned in the middle of the Atlantic; we didn't
have the equipment or ambition to do any great amount of salvage work.

The Empress of Britain would have been a pretty good bet, for instance, except that it was lying at pretty nearly
a forty-five-degree angle in its berth. So was the United States, and so was the Caronia. The Stockholm was straight
enough, but I took a good look, and only one tier of portholes was showing above the water--evidently it had settled
nice and even, but it was on the bottom all the same. Well, that mud sucks with a fine tight grip, and we weren't
going to try to loosen it.

All in all, eleven of the sixteen ships were out of commission just from what we could see driving by.
Vern and I looked at each other. We stood by the MG, while Amy sprawled her legs over the side and waited
for us to make up our minds.

"Not good, Sam," said Vern, looking worried.

I said: "Well, that still leaves five. There's the Vulcania, the Cristobal--"
"Too small."
"All right. The Manhattan, the Liberté and the Queen Elizabeth."

Amy looked up, her eyes gleaming. "Where's the question?" she demanded. "Naturally, it's the Queen."

I tried to explain. "Please, Amy. Leave these things to us, will you?"
"But the Major won't settle for anything but the best!"
"The Major?"

* * * * *

I glanced at Vern, who wouldn't meet my eyes. "Well," I said, "look at the problems, Amy. First we have to
check it over. Maybe it's been burned out--how do we know? Maybe the channel isn't even deep enough to float it
any more--how do we know? Where are we going to get the oil for it?"

"We'll get the oil," Amy said cheerfully.
"And what if the channel isn't deep enough?"
"She'll float," Amy promised. "At high tide, anyway. Even if the channel hasn't been dredged in ten years."

I shrugged and gave up. What was the use of arguing?

We drove back to the Queen Elizabeth and I had to admit that there was a certain attraction about that big old
dowager. We all got out and strolled down the pier, looking over as much as we could see.

The pier had never been cleaned out. It bothered me a little--I mean I don't like skeletons much--but Amy didn't
seem to mind. The Queen must have just docked when it happened, because you could still see bony queues, as
though they were waiting for customs inspection.

Some of the bags had been opened and the contents scattered around--naturally, somebody was bound to think
of looting the Queen. But there were as many that hadn't been touched as that had been opened, and the whole thing
had the look of an amateur attempt. And that was all to the good, because the fewer persons who had boarded the
Queen in the decade since it happened, the more chance of our finding it in usable shape.

Amy saw a gangplank still up, and with cries of girlish glee ran aboard.

I plucked at Vern's sleeve. "You," I said. "What's this about what the Major won't settle for less than?"
He said: "Aw, Sam, I had to tell her something, didn't I?"
"But what about the Major--"
He said patiently: "You don't understand. It's all part of my plan, see? The Major is the big thing here and he's got a birthday coming up next month. Well, the way I put it to Amy, we'll fix him up with a yacht as a birthday present, see? And, of course, when it's all fixed up and ready to lift anchor--"

I said doubtfully: "That's the hard way, Vern. Why couldn't we just sort of get steam up and take off?"

He shook his head. "That is the hard way. This way we get all the help and supplies we need, understand?"

I shrugged. That was the way it was, so what was the use of arguing?

But there was one thing more on my mind. I said: "How come Amy's so interested in making the Major happy?"

Vern chortled. "Jealous, eh?"

"I asked a question!"

"Calm down, boy. It's just that he's in charge of things here so naturally she wants to keep in good with him."

I scowled. "I keep hearing stories about how the Major's chief interest in life is women. You sure she isn't ambitious to be one of them?"

He said: "The reason she wants to keep him happy is so she won't be one of them."

The name of the place was Bayonne.

Vern said: "One of them's got to have oil, Sam. It has to."

"Sure," I said.

"There's no question about it. Look, this is where the tankers came to discharge oil. They'd come in here, pump the oil into the refinery tanks and--"

"Vern," I said. "Let's look, shall we?"

He shrugged, and we hopped off the little outboard motorboat onto a landing stage. The tankers towered over us, rusty and screeching as the waves rubbed them against each other.

There were fifty of them there at least, and we poked around them for hours. The hatches were rusted shut and unmanageable, but you could tell a lot by sniffing. Gasoline odor was out; smell of seaweed and dead fish was out; but the heavy, rank smell of fuel oil, that was what we were sniffing for. Crews had been aboard these ships when the missiles came, and crews were still aboard.

Beyond the two-part superstructures of the tankers, the skyline of New York was visible. I looked up, sweating, and saw the Empire State Building and imagined Amy up there, looking out toward us.

She knew we were here. It was her idea. She had scrounged up a naval engineer, or what she called a naval engineer--he had once been a stoker on a ferryboat. But he claimed he knew what he was talking about when he said the only thing the Queen needed to make 'er go was oil. And so we left him aboard to tinker and polish, with a couple of helpers Amy detached from the police force, and we tackled the oil problem.

Which meant Bayonne. Which was where we were.

It had to be a tanker with at least a fair portion of its cargo intact, because the Queen was a thirsty creature, drinking fuel not by the shot or gallon but by the ton.

"Saaam! Sam Dunlap!"

I looked up, startled. Five ships away, across the U of the mooring, Vern Engdahl was bellowing at me through cupped hands.

"I found it!" he shouted. "Oil, lots of oil! Come look!"

I clasped my hands over my head and looked around. It was a long way around to the tanker Vern was on, hopping from deck to deck, detouring around open stretches.

I shouted: "I'll get the boat!"

He waved and climbed up on the railing of the ship, his feet dangling over, looking supremely happy and pleased with himself. He lit a cigarette, leaned back against the upward sweep of the rail and waited.

It took me a little time to get back to the boat and a little more time than that to get the damn motor started. Vern! "Let's not take that lousy little twelve horse-power, Sam," he'd said reasonably. "The twenty-five's more what we need!" And maybe it was, but none of the motors had been started in most of a decade, and the twenty-five was just that much harder to start now.

I struggled over it, swearing, for twenty minutes or more.

The tanker by whose side we had tied up began to swing toward me as the tide changed to outgoing.

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For a moment there, I was counting seconds, expecting to have to make a jump for it before the big red steel flank squeezed the little outboard flat against the piles.

But I got it started--just about in time. I squeezed out of the trap with not much more than a yard to spare and threaded my way into open water.
There was a large, threatening sound, like an enormous slow cough.
I rounded the stern of the last tanker between me and open water, and looked into the eye of a fire-breathing
dragon.
Vern and his cigarettes! The tanker was loose and ablaze, bearing down on me with the slow drift of the ebbing
tide. From the hatches on the forward deck, two fountains of fire spurted up and out, like enormous nostrils spouting
flame. The hawsers had been burned through, the ship was adrift, I was in its path--
And so was the frantically splashing figure of Vern Engdahl, trying desperately to swim out of the way in the
water before it.

What kept it from blowing up in our faces I will never know, unless it was the pressure in the tanks forcing
the flame out; but it didn't. Not just then. Not until I had Engdahl aboard and we were out in the middle of the Hudson,
starting back; and then it went up all right, all at once, like a missile or a volcano; and there had been fifty tankers in
that one mooring, but there weren't any any more, or not in shape for us to use.

I looked at Engdahl.
He said defensively: "Honest, Sam, I thought it was oil. It smelled like oil. How was I to know--"
"Shut up," I said.
He shrugged, injured. "But it's all right, Sam. No fooling. There are plenty of other tankers around. Plenty.
Down toward the Amboys, maybe moored out in the channel. There must be. We'll find them."
"No," I said. "You will."
And that was all I said, because I am forgiving by nature; but I thought a great deal more.
Surprisingly, though, he did find a tanker with a full load, the very next day.

It took him two weeks. First it was finding the tanker, then it was locating a tug in shape to move, then it was
finding someone to pilot the tug. Then it was windless day--because the pilot he found had got all his experience sailing Star boats on Long Island Sound--and then it was easing the tanker out of Newark Bay,
into the channel, down to the pier in the North River--

Oh, it was work and no fooling. I enjoyed it very much, because I didn't have to do it.
* * * * *
But I had enough to keep me busy at that. I found a man who claimed he used to be a radio engineer. And if he
was an engineer, I was Albert Einstein's mother, but at least he knew which end of a soldering iron was hot. There
was no need for any great skill, since there weren't going to be very many vessels to communicate with.

Things began to move.
The advantage of a ship like the Queen, for our purposes, was that the thing was pretty well automated to start
out with. I mean never mind what the seafaring unions required in the way of flesh-and-blood personnel. What it
came down to was that one man in the bridge or wheelhouse could pretty well make any part of the ship go or not

The engine-room telegraph wasn't hooked up to control the engines, no. But the wiring diagram needed only a
few little changes to get the same effect, because where in the original concept a human being would take a look at
the repeater down in the engine room, nod wisely, and push a button that would make the engines stop, start, or
whatever--why, all we had to do was cut out the middleman, so to speak.

Our genius of the soldering iron replaced flesh and blood with some wiring and, presto, we had centralized
engine control.

The steering was even easier. Steering was a matter of electronic control and servomotors to begin with.
Windjammers in the old movies might have a man lashed to the wheel whose muscle power turned the rudder, but,
believe me, a big superliner doesn't. The rudders weigh as much as any old windjammer ever did from stem to stern;
you have to have motors to turn them; and it was only a matter of getting out the old soldering iron again.

By the time we were through, we had every operational facility of the Queen hooked up to a single panel on the
bridge.

Engdahl showed up with the oil tanker just about the time we got the wiring complete. We rigged up a pump
and filled the bunkers till they were topped off full. We guessed, out of hope and ignorance, that there was enough in
there to take us half a dozen times around the world at normal cruising speed, and maybe there was. Anyway, it
didn't matter, for surely we had enough to take us anywhere we wanted to go, and then there would be more.
We crossed our fingers, turned our ex-ferry-stoker loose, pushed a button--
Smoke came out of the stacks.
The antique screws began to turn over. Astern, a sort of hump of muddy water appeared. The Queen quivered
underfoot. The mooring hawser creaked and sang.
"Turn her off!" screamed Engdahl. "She's headed for Times Square!"

Well, that was an exaggeration, but not much of one; and there wasn't any sense in stirring up the bottom mud. I pushed buttons and the screws stopped. I pushed another button, and the big engines quietly shut themselves off, and in a few moments the stacks stopped puffing their black smoke.

The ship was alive.

Solemnly Engdahl and I shook hands. We had the thing licked. All, that is, except for the one small problem of Arthur.

* * * * *

The thing about Arthur was they had put him to work.

It was in the power station, just as Amy had said, and Arthur didn't like it. The fact that he didn't like it was a splendid reason for staying away from there, but I let my kind heart overrule my good sense and paid him a visit.

It was way over on the East Side, miles and miles from any civilized area. I borrowed Amy's MG, and borrowed Amy to go with it, and the two of us packed a picnic lunch and set out. There were reports of deer on Avenue A, so I brought a rifle, but we never saw one; and if you want my opinion, those reports were nothing but wishful thinking. I mean if people couldn't survive, how could deer?

We finally threaded our way through the clogged streets and parked in front of the power station.

"There's supposed to be a guard," Amy said doubtfully.

I looked. I looked pretty carefully, because if there was a guard, I wanted to see him. The Major's orders were that vital defense installations--such as the power station, the PX and his own barracks building--were to be guarded against trespassers on a shoot-on-sight basis and I wanted to make sure that the guard knew we were privileged persons, with passes signed by the Major's own hand. But we couldn't find him. So we walked in through the big door, peered around, listened for the sounds of machinery and walked in that direction.

And then we found him; he was sound asleep. Amy, looking indignant, shook him awake.

"Is that how you guard military property?" she scolded. "Don't you know the penalty for sleeping at your post?"

The guard said something irritable and unhappy. I got her off his back with some difficulty, and we located Arthur.

Picture a shiny four-gallon tomato can, with the label stripped off, hanging by wire from the flashing-light panels of an electric computer. That was Arthur. The shiny metal cylinder was his prosthetic tank; the wires were the leads that served him for fingers, ears and mouth; the glittering panel was the control center for the Consolidated Edison Eastside Power Plant No. 1.

"Hi, Arthur," I said, and a sudden ear-splitting thunderous hiss was his way of telling me that he knew I was there.

I didn't know exactly what it was he was trying to say and I didn't want to; fortune spares me few painful moments, and I accept with gratitude the ones it does. The Major's boys hadn't bothered to bring Arthur's typewriter along--I mean who cares what a generator-governor had to offer in the way of conversation?--so all he could do was blow off steam from the distant boilers.

* * * * *

Well, not quite all. Light flashed; a bucket conveyor began crashingly to dump loads of coal; and an alarm gong began to pound.

"Please, Arthur," I begged. "Shut up a minute and listen, will you?"

More lights. The gong rapped half a dozen times sharply, and stopped.

I said: "Arthur, you've got to trust Vern and me. We have this thing figured out now. We've got the Queen Elizabeth--"

A shattering hiss of steam--meaning delight this time, I thought. Or anyway hoped.

"--and its only a question of time until we can carry out the plan. Vern says to apologize for not looking in on you--" hiss--"but he's been busy. And after all, you know it's more important to get everything ready so you can get out of this place, right?"

"Psst," said Amy.

She nodded briefly past my shoulder. I looked, and there was the guard, looking sleepy and surly and definitely suspicious.

I said heartily: "So as soon as I fix it up with the Major, we'll arrange for something better for you. Meanwhile, Arthur, you're doing a capital job and I want you to know that all of us loyal New York citizens and public servants deeply appreciate--"

Thundering crashes, bangs, gongs, hisses, and the scream of a steam whistle he'd found somewhere. Arthur was mad.

"So long, Arthur," I said, and we got out of there--just barely in time. At the door, we found that Arthur had
reversed the coal scoops and a growing mound of it was pouring into the street where we'd left the MG parked. We got the car started just as the heap was beginning to reach the bumpers, and at that the paint would never again be the same.

Oh, yes, he was mad. I could only hope that in the long run he would forgive us, since we were acting for his best interests, after all.

Anyway, I thought we were.

Still, things worked out pretty well—especially between Amy and me. Engdahl had the theory that she had been dodging the Major so long that anybody looked good to her, which was hardly flattering. But she and I were getting along right well.

She said worriedly: "The only thing, Sam, is that, frankly, the Major has just about made up his mind that he wants to marry me—"

"He is married!" I yelped.

"Naturally he's married. He's married to—so far—one hundred and nine women. He's been hitting off a marriage a month for a good many years now and, to tell you the truth, I think he's got the habit Any way, he's got his eye on me."

I demanded jealously: "Has he said anything?"

She picked a sheet of onionskin paper out of her bag and handed it to me. It was marked Top Secret, and it really was, because it hadn't gone through his regular office—I knew that because I was his regular office. It was only two lines of text and sloppily typed at that:

Lt. Amy Bankhead will report to HQ at 1700 hours 1 July to carry out orders of the Commanding Officer.

The first of July was only a week away. I handed the orders back to her.

"And the orders of the Commanding Officer will be—" I wanted to know.

She nodded. "You guessed it."

I said: "We'll have to work fast."

On the thirtieth of June, we invited the Major to come aboard his palatial new yacht.

"Ah, thank you," he said gratefully. "A surprise? For my birthday? Ah, you loyal members of my command make up for all that I've lost—all of it!" He nearly wept.

I said: "Sir, the pleasure is all ours," and backed out of his presence. What's more, I meant every word.

It was a select party of slightly over a hundred. All of the wives were there, barring twenty or thirty who were in disfavor—still, that left over eighty. The Major brought half a dozen of his favorite officers. His bodyguard and our crew added up to a total of thirty men.

We were set up to feed a hundred and fifty, and to provide liquor for twice that many, so it looked like a nice friendly brawl. I mean we had our radio operator handing out highballs as the guests stepped on board. The Major was touched and delighted; it was exactly the kind of party he liked.

He came up the gangplank with his face one great beaming smile. "Eat! Drink!" he cried. "Ah, and be merry!" He stretched out his hands to Amy, standing by behind the radio op. "For tomorrow we wed," he added, and sentimentally kissed his proposed bride.

I cleared my throat. "How about inspecting the ship, Major?" I interrupted.

"Plenty of time for that, my boy," he said. "Plenty of time for that." But he let go of Amy and looked around him. Well, it was worth looking at. Those Englishmen really knew how to build a luxury liner. God rest them.

The girls began roaming around.

It was a hot day and late afternoon, and the girls began discarding jackets and boleros, and that began to annoy the Major.

"Ah, cover up there!" he ordered one of his wives. "You too there, what's-your-name. Put that blouse back on!"

It gave him something to think about. He was a very jealous man, Amy had said, and when you stop to think about it, a jealous man with a hundred and nine wives to be jealous of really has a job. Anyway, he was busy watching his wives and keeping his military cabinet and his bodyguard busy too, and that made him too busy to notice when I tipped the high sign to Vern and took off.

VI

In Consolidated Edison's big power plant, the guard was friendly. "I hear the Major's over on your boat, pal. Big doings. Got a lot of the girls there, hey?"

He bent, sniggering, to look at my pass.

"That's right, pal," I said, and slug hed him.

Arthur screamed at me with a shrill blast of steam as I came in. But only once. I wasn't there for conversation. I
began ripping apart his comfy little home of steel braces and copper wires, and it didn't take much more than a
minute before I had him free. And that was very fortunate because, although I had tied up the guard, I hadn't done it
very well, and it was just about the time I had Arthur's steel case tucked under my arm that I heard a yelling and
bellowing from down the stairs.

The guard had got free.

"Keep calm, Arthur!" I ordered sharply. "We'll get out of this, don't you worry!"

But he wasn't worried, or anyway didn't show it, since he couldn't. I was the one who was worried. I was up on
the second floor of the plant, in the control center, with only one stairway going down that I knew about, and that
one thoroughly guarded by a man with a grudge against me. Me, I had Arthur, and no weapon, and I hadn't a doubt
in the world that there were other guards around and that my friend would have them after me before long.

Problem. I took a deep breath and swallowed and considered jumping out the window. But it wasn't far enough
to the ground.

Feet pounded up the stairs, more than two of them. With Arthur dragging me down on one side, I hurried, fast
as I could, along the steel galleries that surrounded the biggest boiler. It was a nice choice of alternatives—if I stayed
quiet, they would find me; if I ran, they would hear me, and then find me.

But ahead there was—what? Something. A flight of stairs, it looked like, going out and, yes, up. Up? But I was
already on the second floor.

"Hey, you!" somebody bellowed from behind me.

I didn't stop to consider. I ran. It wasn't steps, not exactly; it was a chain of coal scoops on a long derrick arm, a
moving bucket arrangement for unloading fuel from barges. It did go up, though, and more important it went out.
The bucket arm was stretched across the clogged roadway below to a loading tower that hung over the water.
If I could get there, I might be able to get down. If I could get down—yes, I could see it; there were three or four
mahogany motor launches tied to the foot of the tower.

And nobody around.

I looked over my shoulder, and didn't like what I saw, and scuttled up that chain of enormous buckets like a
roach on a washboard, one hand for me and one hand for Arthur.

* * * * *

Thank heaven, I had a good lead on my pursuers—I needed it. I was on the bucket chain while they were still
almost a city block behind me, along the galleries. I was halfway across the roadway, afraid to look down, before
they reached the butt end of the chain.

Clash-clatter. Clank! The bucket under me jerked and clattered and nearly threw me into the street. One of
those jokers had turned on the conveyor! It was a good trick, all right, but not quite in time. I made a flying jump
and I was on the tower.

I didn't stop to thumb my nose at them, but I thought of it.

I was down those steel steps, breathing like a spouting whale, in a minute flat, and jumping out across the
concrete, coal-smeared yard toward the moored launches. Quickly enough, I guess, but with nothing at all to spare,
because although I hadn't seen anyone there, there was a guard.

He popped out of a doorway, blinking foolishly; and overhead the guards at the conveyor belt were screaming
at him. It took him a second to figure out what was going on, and by that time I was in a launch, cast off the rope,
kicked it free, and fumbled for the starting button.

It took me several seconds to realize that a rope was required, that in fact there was no button; and by then I
was floating yards away, but the pudgy pop-eyed guard was also in a launch, and he didn't have to fumble. He knew.
He got his motor started a fraction of a second before me, and there he was, coming at me, set to ram. Or so it
looked.

I wrenched at the wheel and brought the boat hard over; but he swerved too, at the last moment, and brought up
something that looked a little like a spear and a little like a sickle and turned out to be a boathook. I ducked, just in
time. It sizzled over my head as he swung and crashed against the windshield. Hunks of safety glass splashed out
over the forward deck, but better that than my head.

Boathooks, hey? I had a boathook too! If he didn't have another weapon, I was perfectly willing to play; I'd
been sitting and taking it long enough and I was very much attracted by the idea of fighting back. The guard
recovered his balance, swore at me, fought the wheel around and came back.

We both curved out toward the center of the East River in intersecting arcs. We closed. He swung first. I
ducked—
And from a crouch, while he was off balance, I caught him in the shoulder with the hook.
He made a mighty splash.

I throttled down the motor long enough to see that he was still conscious.
"Touché, buster," I said, and set course for the return trip down around the foot of Manhattan, back toward the Queen.

* * * * *

It took a while, but that was all right; it gave everybody a nice long time to get plastered. I sneaked aboard, carrying Arthur, and turned him over to Vern. Then I rejoined the Major. He was making an inspection tour of the ship--what he called an inspection, after his fashion.

He peered into the engine rooms and said: "Ah, fine."

He stared at the generators that were turning over and nodded when I explained we needed them for power for lights and everything and said: "Ah, of course."

He opened a couple of stateroom doors at random and said: "Ah, nice."

And he went up on the flying bridge with me and such of his officers as still could walk and said: "Ah."

Then he said in a totally different tone: "What the devil's the matter over there?"

He was staring east through the muggy haze. I saw right away what it was that was bothering him--easy, because I knew where to look. The power plant way over on the East Side was billowing smoke.

"Where's Vern Engdahl? That gadget of his isn't working right!"

"You mean Arthur?"

"I mean that brain in a bottle. It's Engdahl's responsibility, you know!"

Vern came up out of the wheelhouse and cleared his throat. "Major," he said earnestly, "I think there's some trouble over there. Maybe you ought to go look for yourself."

"Trouble?"

"I, uh, hear there've been power failures," Vern said lamely. "Don't you think you ought to inspect it? I mean just in case there's something serious?"

The Major stared at him frostily, and then his mood changed. He took a drink from the glass in his hand, quickly finishing it off.

"Ah," he said, "hell with it. Why spoil a good party? If there are going to be power failures, why, let them be. That's my motto!"

Vern and I looked at each other. He shrugged slightly, meaning, well, we tried. And I shrugged slightly, meaning, what did you expect? And then he glanced upward, meaning, take a look at what's there.

But I didn't really have to look because I heard what it was. In fact, I'd been hearing it for some time. It was the Major's entire air force--two helicopters, swirling around us at an average altitude of a hundred feet or so. They showed up bright against the gathering clouds overhead, and I looked at them with considerable interest--partly because I considered it an even-money bet that one of them would be playing crumple-fender with our stacks, partly because I had an idea that they were not there solely for show.

I said to the Major: "Chief, aren't they coming a little close? I mean it's your ship and all, but what if one of them takes a spill into the bridge while you're here?"

He grinned. "They know better," he bragged. "Ah, besides, I want them close. I mean if anything went wrong."

I said, in a tone that showed as much deep hurt as I could manage: "Sir, what could go wrong?"

"Oh, you know." He patted my shoulder limply. "Ah, no offense?" he asked.

I shook my head. "Well," I said, "let's go below."

* * * * *

All of it was done carefully, carefully as could be. The only thing was, we forgot about the typewriters. We got everybody, or as near as we could, into the Grand Salon where the food was, and right there on a table at the end of the hall was one of the typewriters clacking away. Vern had rigged them up with rolls of paper instead of sheets, and maybe that was ingenious, but it was also a headache just then. Because the typewriter was banging out:

LEFT FOURTEEN AND TWENTYONE BOILERS WITH A FULL HEAD OF STEAM AND THE SAFETY VALVES LOCKED BOY I TELL YOU WHEN THOSE THINGS LET GOURE GOING TO HEAR A NOISE THATLl KNOCK YOUR HAT OFF

The Major inquired politely: "Something to do with the ship?"

"Oh, that," said Vern. "Yeah. Just a little, uh, something to do with the ship. Say, Major, here's the bar. Real scotch, see? Look at the label!"

The Major glanced at him with faint contempt--well, he'd had the pick of the greatest collection of high-priced liquor stores in the world for ten years, so no wonder. But he allowed Vern to press a drink on him.

And the typewriter kept rattling:

LOOKS LIKE RAIN ANY MINUTE NOW HOO BOY IM GLAD I WONT BE IN THOSE WHIRLYBIRDS WHEN THE STORM STARTS SAY VERN WHY DONT YOU EVER ANSWER ME Q Q ISN'T IT ABOUT TIME TO TAKE OFF XXX I MEAN GET UNDER WEIGH Q Q
Some of the "clerks, typists, domestic personnel and others"—that was the way they were listed on the T/O; it was only coincidence that the Major had married them all—were staring at the typewriter.

"Drinks!" Vern called nervously. "Come on, girls! Drinks!"

* * * * *

The Major poured himself a stiff shot and asked: "What is that thing? A teletype or something?"

"That's right," Vern said, trailing after him as the Major wandered over to inspect it.

I GIVE THOSE BOILERS ABOUT TEN MORE MINUTES SAM WELL WHAT ABOUT IT Q Q READY TO SHOVE OFF Q Q

The Major said, frowning faintly: "Ah, that reminds me of something. Now what is it?"

"More scotch?" Vern cried. "Major, a little more scotch?"

The Major ignored him, scowling. One of the "clerks, typists" said: "Honey, you know what it is? It's like that pross you had, remember? It was on our wedding night, and you'd just got it, and you kept asking it to tell you limericks."

The Major snapped his fingers. "Knew I'd get it," he glowed. Then abruptly he scowled again and turned to face Vern and me. "Say--" he began.

I said weakly: "The boilers."

The Major stared at me, then glanced out the window. "What boilers?" he demanded. "It's just a thunderstorm. Been building up all day. Now what about this? Is that thing--"

But Vern was paying him no attention. "Thunderstorm?" he yelled. "Arthur, you listening? Are the helicopters gone?"

YES YES YES

"Then shove off, Arthur! Shove off!"

The typewriter rattled and slammed madly.

The Major yelled angrily: "Now listen to me, you! I'm asking you a question!"

But we didn't have to answer, because there was a thrumming and a throbbing underfoot, and then one of the "clerks, typists" screamed: "The dock!" She pointed at a porthole. "It's moving!"

* * * * *

Well, we got out of there—barely in time. And then it was up to Arthur. We had the whole ship to roam around in and there were plenty of places to hide. They had the whole ship to search. And Arthur was the whole ship.

Because it was Arthur, all right, brought in and hooked up by Vern, attained to his greatest dream and ambition. He was skipper of a superliner, and more than any skipper had ever been—the ship was his body, as the prosthetic tank had never been; the keel his belly, the screws his feet, the engines his heart and lungs, and every moving part that could be hooked into central control his many, many hands.

Search for us? They were lucky they could move at all! Fire Control washed them with salt water hoses, directed by Arthur's brain. Watertight doors, proof against sinking, locked them away from us at Arthur's whim.

The big bull whistle overhead brayed like a clamoring Gabriel, and the ship's bells tinkled and clanged. Arthur backed that enormous ship out of its berth like a racing scull on the Schuykill. The four giant screws lashed the water into white foam, and then the thin mud they sucked up into tan; and the ship backed, swerved, lashed the water, stopped, and staggered crazily forward.

Arthur brayed at the Statue of Liberty, tooted good-by to Staten Island, feinted a charge at Sandy Hook and really laid back his ears and raced once he got to deep water past the moored lightship.

We were off!

Well, from there on, it was easy. We let Arthur have his fun with the Major and the bodyguards—and by the sodden, whimpering shape they were in when they came out, it must really have been fun for him. There were just the three of us and only Vern and I had guns—but Arthur had the Queen Elizabeth, and that put the odds on our side.

We gave the Major a choice: row back to Coney Island—we offered him a boat, free of charge—or come along with us as cabin boy. He cast one dim-eyed look at the hundred and nine "clerks, typists" and at Amy, who would never be the hundred and tenth.

And then he shrugged and, game loser, said: "Ah, why not? I'll come along."

* * * * *

And why not, when you come to think of it? I mean ruling a city is nice and all that, but a sea voyage is a refreshing change. And while a hundred and nine to one is a respectable female-male ratio, still it must be wearing; and eighty to thirty isn't so bad, either. At least, I guess that was what was in the Major's mind. I know it was what was in mine.

And I discovered that it was in Amy's, for the first thing she did was to march me over to the typewriter and say: "You've had it, Sam. We'll dispose with the wedding march—just get your friend Arthur here to marry us."
"Arthur?"
"The captain," she said. "We're on the high seas and he's empowered to perform marriages."

Vern looked at me and shrugged, meaning, you asked for this one, boy. And I looked at him and shrugged, meaning, it could be worse.

And indeed it could. We'd got our ship; we'd got our ship's company--because, naturally, there wasn't any use stealing a big ship for just a couple of us. We'd had to manage to get a sizable colony aboard. That was the whole idea.

The world, in fact, was ours. It could have been very much worse indeed, even though Arthur was laughing so hard as he performed the ceremony that he jammed up all his keys.
Betty looked up from her magazine. She said mildly, "You're late."

"Don't yell at me, I feel awful," Simon told her. He sat down at his desk, passed his tongue over his teeth in distaste, groaned, fumbled in a drawer for the aspirin bottle.

He looked over at Betty and said, almost as though reciting, "What I need is a vacation."

"What," Betty said, "are you going to use for money?"

"Providence," Simon told her whilst fiddling with the aspirin bottle, "will provide."

"Hm-m-m. But before providing vacations it'd be nice if Providence turned up a missing jewel deal, say. Something where you could deduce that actually the ruby ring had gone down the drain and was caught in the elbow. Something that would net about fifty dollars."

Simon said, mournful of tone, "Fifty dollars? Why not make it five hundred?"

"I'm not selfish," Betty said. "All I want is enough to pay me this week's salary."

"Money," Simon said. "When you took this job you said it was the romance that appealed to you."

"Hm-m-m. I didn't know most sleuthing amounted to snooping around department stores to check on the clerks knocking down."

Simon said, enigmatically, "Now it comes."

* * * * *

There was a knock.

Betty bounced up with Olympic agility and had the door swinging wide before the knocking was quite completed.

He was old, little and had bug eyes behind pince-nez glasses. His suit was cut in the style of yesteryear but when a suit costs two or three hundred dollars you still retain caste whatever the styling.

Simon said unenthusiastically, "Good morning, Mr. Oyster." He indicated the client's chair. "Sit down, sir."

The client fussed himself with Betty's assistance into the seat, bug-eyed Simon, said finally, "You know my name, that's pretty good. Never saw you before in my life. Stop fussing with me, young lady. Your ad in the phone book says you'll investigate anything."

"Anything," Simon said. "Only one exception."

"Excellent. Do you believe in time travel?"

Simon said nothing. Across the room, where she had resumed her seat, Betty cleared her throat. When Simon continued to say nothing she ventured, "Time travel is impossible."

"Why?"

"Why?"

"Yes, why?"

Betty looked to her boss for assistance. None was forthcoming. There ought to be some very quick, positive, definite answer. She said, "Well, for one thing, paradox. Suppose you had a time machine and traveled back a hundred years or so and killed your own great-grandfather. Then how could you ever be born?"

"Confound it if I know," the little fellow growled. "How?"

Simon said, "Let's get to the point, what you wanted to see me about."

"I want to hire you to hunt me up some time travelers,

Betty was too far in now to maintain her proper role of silent secretary. "Time travelers," she said, not very intelligently.

The potential client sat more erect, obviously with intent to hold the floor for a time. He removed the pince-nez glasses and pointed them at Betty. He said, "Have you read much science fiction, Miss?"

"Some," Betty admitted.

"Then you'll realize that there are a dozen explanations of the paradoxes of time travel. Every writer in the field worth his salt has explained them away. But to get on. It's my contention that within a century or so man will have solved the problems of immortality and eternal youth, and it's also my suspicion that he will eventually be able to travel in time. So convinced am I of these possibilities that I am willing to gamble a portion of my fortune to
investigate the presence in our era of such time travelers."

Simon seemed incapable of carrying the ball this morning, so Betty said, "But ... Mr. Oyster, if the future has developed time travel why don't we ever meet such travelers?"

Simon put a word. "The usual explanation, Betty, is that they can't afford to allow the space-time continuum track to be altered. If, say, a time traveler returned to a period of twenty-five years ago and shot Hitler, then all subsequent history would be changed. In that case, the time traveler himself might never be born. They have to tread mighty carefully."

Mr. Oyster was pleased. "I didn't expect you to be so well informed on the subject, young man."

Simon shrugged and fumbled again with the aspirin bottle.

Mr. Oyster went on. "I've been considering the matter for some time and--"

Simon held up a hand. "There's no use prolonging this. As I understand it, you're an elderly gentleman with a considerable fortune and you realize that thus far nobody has succeeded in taking it with him."

Mr. Oyster returned his glasses to their perch, bug-eyed Simon, but then nodded.

Simon said, "You want to hire me to find a time traveler and in some manner or other--any manner will do--exhort from him the secret of eternal life and youth, which you figure the future will have discovered. You're willing to pony up a part of this fortune of yours, if I can deliver a bona fide time traveler."

"Right!"

Betty had been looking from one to the other. Now she said, plaintively, "But where are you going to find one of these characters--especially if they're interested in keeping hid?"

The old boy was the center again. "I told you I'd been considering it for some time. The Oktoberfest, that's where they'd be!" He seemed elated.

Betty and Simon waited.

"The Oktoberfest," he repeated. "The greatest festival the world has ever seen, the carnival, feria, fiesta to beat them all. Every year it's held in Munich. Makes the New Orleans Mardi gras look like a quilting party." He began to swing into the spirit of his description. "It originally started in celebration of the wedding of some local prince a century and a half ago and the Bavarians had such a bang-up time they've been holding it every year since. The Munich breweries do up a special beer, Marzenbräu they call it, and each brewery opens a tremendous tent on the fair grounds which will hold five thousand customers apiece. Millions of liters of beer are put away, hundreds of thousands of barbecued chickens, a small herd of oxen are roasted whole over spits, millions of pair of weisswurst, a very special sausage, millions upon millions of pretzels--"

"All right," Simon said. "We'll accept it. The Oktoberfest is one whale of a wingding."

"Well," the old boy pursued, into his subject now, "that's where they'd be, places like the Oktoberfest. For one thing, a time traveler wouldn't be conspicuous. At a festival like this somebody with a strange accent, or who didn't know exactly how to wear his clothes correctly, or was off the ordinary in any of a dozen other ways, wouldn't be noticed. You could be a four-armed space traveler from Mars, and you still wouldn't be conspicuous at the Oktoberfest. People would figure they had D.T.'s."

"But why would a time traveler want to go to a--" Betty began.

"Why not! What better opportunity to study a people than when they are in their cups? If you could go back a few thousand years, the things you would wish to see would be a Roman Triumph, perhaps the Rites of Dionysus, or one of Alexander's orgies. You wouldn't want to wander up and down the streets of, say, Athens while nothing was going on, particularly when you might be revealed as a suspicious character not being able to speak the language, not knowing how to wear the clothes and not familiar with the city's layout." He took a deep breath. "No ma'am, you'd have to stick to some great event, both for the sake of actual interest and for protection against being unmasked."

The old boy wound it up. "Well, that's the story. What are your rates? The Oktoberfest starts on Friday and continues for sixteen days. You can take the plane to Munich, spend a week there and--"

Simon was shaking his head. "Not interested."

As soon as Betty had got her jaw back into place, she glared unbelievingly at him.

Mr. Oyster was taken aback himself. "See here, young man, I realize this isn't an ordinary assignment, however, as I said, I am willing to risk a considerable portion of my fortune--"

"Sorry," Simon said. "Can't be done."

"A hundred dollars a day plus expenses," Mr. Oyster said quietly. "I like the fact that you already seem to have some interest and knowledge of the matter. I liked the way you knew my name when I walked in the door; my picture doesn't appear often in the papers."
"No go," Simon said, a sad quality in his voice. "A fifty thousand dollar bonus if you bring me a time traveler."
"Out of the question," Simon said.
"But why?" Betty wailed.
"Just for laughs," Simon told the two of them sourly, "suppose I tell you a funny story. It goes like this:"

* * * * * * * * *

I got a thousand dollars from Mr. Oyster (Simon began) in the way of an advance, and leaving him with Betty who was making out a receipt, I hustled back to the apartment and packed a bag. Hell, I'd wanted a vacation anyway, this was a natural. On the way to Idlewild I stopped off at the Germany Information Offices for some tourist literature.

It takes roughly three and a half hours to get to Gander from Idlewild. I spent the time planning the fun I was going to have. It takes roughly seven and a half hours from Gander to Shannon and I spent that time dreaming up material I could put into my reports to Mr. Oyster. I was going to have to give him some kind of report for his money. Time travel yet! What a laugh!

Between Shannon and Munich a faint suspicion began to simmer in my mind. These statistics I read on the Oktoberfest in the Munich tourist pamphlets. Five million people attended annually.

Where did five million people come from to attend an overgrown festival in comparatively remote Southern Germany? The tourist season is over before September 21st, first day of the gigantic beer bust. Nor could the Germans account for any such number. Munich itself has a population of less than a million, counting children.

And those millions of gallons of beer, the hundreds of thousands of chickens, the herds of oxen. Who ponied up all the money for such expenditures? How could the average German, with his twenty-five dollars a week salary? In Munich there was no hotel space available. I went to the Bahnhof where they have a hotel service and applied. They put my name down, pocketed the husky bribe, showed me where I could check my bag, told me they'd do what they could, and to report back in a few hours.

I had another suspicious twinge. If five million people attended this beer bout, how were they accommodated? The Theresienwiese, the fair ground, was only a few blocks away. I was stiff from the plane ride so I walked.

* * * * *

There are seven major brewers in the Munich area, each of them represented by one of the circuslike tents that Mr. Oyster mentioned. Each tent contained benches and tables for about five thousand persons and from six to ten thousands pack themselves in, competing for room. In the center is a tremendous bandstand, the musicians all lederhosen clad, the music as Bavarian as any to be found in a Bavarian beer hall. Hundreds of peasant garbed frauleins darted about the tables with quart sized earthenware mugs, platters of chicken, sausage, kraut and pretzels.

I found a place finally at a table which had space for twenty-odd beer bibbers. Odd is right. As weird an assortment of Germans and foreign tourists as could have been dreamed up, ranging from a seventy- or eighty-year-old couple in Bavarian costume, to the bald-headed drunk across the table from me.

A desperate waitress bearing six mugs of beer in each hand scurried past. They call them masses, by the way, not mugs. The bald-headed character and I both held up a finger and she slid two of the masses over to us and then hustled on.

"Down the hatch," the other said, holding up his mass in toast.
"To the ladies," I told him. Before sipping, I said, "You know, the tourist pamphlets say this stuff is eighteen per cent. That's nonsense. No beer is that strong." I took a long pull.

He looked at me, waiting.

A mass or two apiece later he looked carefully at the name engraved on his earthenware mug. "Löwenbräu," he said. He took a small notebook from his pocket and a pencil, noted down the word and returned the things.

"That's a queer looking pencil you have there," I told him. "German?"
"Venusian," he said. "Oops, sorry. Shouldn't have said that."

I had never heard of the brand so I skipped it.

"Next is the Hofbräu," he said.

"Next what?" Baldy's conversation didn't seem to hang together very well.

"My pilgrimage," he told me. "All my life I've been wanting to go back to an Oktoberfest and sample every one of the seven brands of the best beer the world has ever known. I'm only as far as Löwenbräu. I'm afraid I'll never make it."


"Arth," he said. "How could you help?"
"I'm still fresh--comparatively. I'll navigate you around. There are seven beer tents. How many have you got through, so far?"

"Two, counting this one," Arth said.
I looked at him. "It's going to be a chore," I said. "You've already got a nice edge on."
Outside, as we made our way to the next tent, the fair looked like every big State-Fair ever seen, except it was bigger. Games, souvenir stands, sausage stands, rides, side shows, and people, people, people.
The Hofbräu tent was as overflowing as the last but we managed to find two seats.
The band was blaring, and five thousand half-swacked voices were roaring accompaniment.
In Muenchen steht ein Hofbräuhaus! Eins, Zwei, G'sufa!
At the G'sufa everybody upped with the mugs and drank each other's health.
"This is what I call a real beer bust," I said approvingly.
Arth was waving to a waitress. As in the Löwenbräu tent, a full quart was the smallest amount obtainable.
A beer later I said, "I don't know if you'll make it or not, Arth."
"Make what?"
"All seven tents."
"Oh."
A waitress was on her way by, mugs foaming over their rims. I gestured to her for refills.
"Where are you from, Arth?"
Arth thought about it. Took another long pull at the beer. "Right across the way from old Albuquerque," he said finally. "Maybe we ought to be getting on to the Pschorrbräu tent."
"Maybe we ought to eat something first," I said. "I'm beginning to feel this. We could get some of that barbecued ox."
"Well, we need some nourishment," I said.
"There's supposed to be considerable nourishment in beer."
That made sense. I yelled, "Fräulein! Zwei neu bier!"

* * * * *

Somewhere along in here the fog rolled in. When it rolled out again, I found myself closing one eye the better to read the lettering on my earthenware mug. It read Augustinerbräu. Somehow we'd evidently navigated from one tent to another.
Arth was saying, "Where's your hotel?"
That seemed like a good question. I thought about it for a while. Finally I said, "Haven't got one. Town's jam packed. Left my bag at the Bahnhof. I don't think we'll ever make it, Arth. How many we got to go?"
"Lost track," Arth said. "You can come home with me."
We drank to that and the fog rolled in again.
When the fog rolled out, it was daylight. Bright, glaring, awful daylight. I was sprawled, complete with clothes, on one of twin beds. On the other bed, also completely clothed, was Arth.
That sun was too much. I stumbled up from the bed, staggered to the window and fumbled around for a blind or curtain. There was none.
Behind me a voice said in horror, "Who ... how ... oh, Wodo, where'd you come from?"
I got a quick impression, looking out the window, that the Germans were certainly the most modern, futuristic people in the world. But I couldn't stand the light. "Where's the shade," I moaned.
Arth did something and the window went opaque.
"That's quite a gadget," I groaned. "If I didn't feel so lousy, I'd appreciate it."
Arth was sitting on the edge of the bed holding his bald head in his hands. "I remember now," he sorrowed.
"You didn't have a hotel. What a stupidity. I'll be phased. Phased all the way down."
"You haven't got a handful of aspirin, have you?" I asked him.
"Just a minute," Arth said, staggering erect and heading for what undoubtedly was a bathroom. "Stay where you are. Don't move. Don't touch anything."
"All right," I told him plaintively. "I'm clean. I won't mess up the place. All I've got is a hangover, not lice."
Arth was gone. He came back in two or three minutes, box of pills in hand. "Here, take one of these,"
I took the pill, followed it with a glass of water.

* * * * *

And went out like a light.

Arth was shaking my arm. "Want another mass?"

The band was blaring, and five thousand half-swacked voices were roaring accompaniment.

In Muenchen steht ein Hofbräuhaus! Eins, Zwei, G'sufa!

At the G'sufa everybody upped with their king-size mugs and drank each other's health.

My head was killing me. "This is where I came in, or something," I groaned.

Arth said, "That was last night." He looked at me over the rim of his beer mug.

Something, somewhere, was wrong. But I didn't care. I finished my mass and then remembered. "I've got to get my bag. Oh, my head. Where did we spend last night?"

Arth said, and his voice sounded cautious, "At my hotel, don't you remember?"

"Not very well," I admitted. "I feel lousy. I must have dimmed out. I've got to go to the Bahnhof and get my luggage."

Arth didn't put up an argument on that. We said good-by and I could feel him watching after me as I pushed through the tables on the way out.

At the Bahnhof they could do me no good. There were no hotel rooms available in Munich. The head was getting worse by the minute. The fact that they'd somehow managed to lose my bag didn't help. I worked on that project for at least a couple of hours. Not only wasn't the bag at the luggage checking station, but the attendant there evidently couldn't make heads nor tails of the check receipt. He didn't speak English and my high school German was inadequate, especially accompanied by a blockbusting hangover.

I didn't get anywhere tearing my hair and complaining from one end of the Bahnhof to the other. I drew a blank on the bag.

And the head was getting worse by the minute. I was bleeding to death through the eyes and instead of butterflies I had bats in my stomach. Believe me, nobody should drink a gallon or more of Marzenbräu.

* * * * *

I decided the hell with it. I took a cab to the airport, presented my return ticket, told them I wanted to leave on the first obtainable plane to New York. I'd spent two days at the Oktoberfest, and I'd had it.

I got more guff there. Something was wrong with the ticket, wrong date or some such. But they fixed that up. I never was clear on what was fouled up, some clerk's error, evidently.

The trip back was as uninteresting as the one over. As the hangover began to wear off--a little--I was almost sorry I hadn't been able to stay. If I'd only been able to get a room I would have stayed, I told myself.

From Idlewild, I came directly to the office rather than going to my apartment. I figured I might as well check in with Betty.

I opened the door and there I found Mr. Oyster sitting in the chair he had been occupying four--or was it five--days before when I'd left. I'd lost track of the time.

I said to him, "Glad you're here, sir. I can report. Ah, what was it you came for? Impatient to hear if I'd had any results?" My mind was spinning like a whirling dervish in a revolving door. I'd spent a wad of his money and had nothing I could think of to show for it; nothing but the last stages of a grand-daddy hangover.

"Came for?" Mr. Oyster snorted. "I'm merely waiting for your girl to make out my receipt. I thought you had already left."

"You'll miss your plane," Betty said.

There was suddenly a double dip of ice cream in my stomach. I walked over to my desk and looked down at the calendar.

Mr. Oyster was saying something to the effect that if I didn't leave today, it would have to be tomorrow, that he hadn't ponied up that thousand dollars advance for anything less than immediate service. Stuffing his receipt in his wallet, he fussed his way out the door.

I said to Betty hopefully, "I suppose you haven't changed this calendar since I left."

Betty said, "What's the matter with you? You look funny. How did your clothes get so mussed? You tore the top sheet off that calendar yourself, not half an hour ago, just before this marble-missing client came in." She added, irrelevantly, "Time travelers yet."

I tried just once more. "Uh, when did you first see this Mr. Oyster?"

"Never saw him before in my life," she said. "Not until he came in this morning."

"This morning," I said weakly.

While Betty stared at me as though it was me that needed candeling by a head shrinker preparatory to being sent off to a pressure cooker, I fished in my pocket for my wallet, counted the contents and winced at the pathetic
remains of the thousand. I said pleadingly, "Betty, listen, how long ago did I go out that door--on the way to the 
airport?"

"You've been acting sick all morning. You went out that door about ten minutes ago, were gone about three 
minutes, and then came back."

* * * * * * * * *

"See here," Mr. Oyster said (interrupting Simon's story), "did you say this was supposed to be amusing, young 
man? I don't find it so. In fact, I believe I am being ridiculed."

Simon shrugged, put one hand to his forehead and said, "That's only the first chapter. There are two more."

"I'm not interested in more," Mr. Oyster said. "I suppose your point was to show me how ridiculous the whole 
idea actually is. Very well, you've done it. Confound it. However, I suppose your time, even when spent in this 
manner, has some value. Here is fifty dollars. And good day, sir!"

He slammed the door after him as he left.

Simon winced at the noise, took the aspirin bottle from its drawer, took two, washed them down with water 
from the desk carafe.

Betty looked at him admiringly. Came to her feet, crossed over and took up the fifty dollars. "Week's wages,"
she said. "I suppose that's one way of taking care of a crackpot. But I'm surprised you didn't take his money and 
enjoy that vacation you've been yearning about."

"I did," Simon groaned. "Three times."

Betty stared at him. "You mean--"

Simon nodded, miserably.

She said, "But Simon. Fifty thousand dollars bonus. If that story was true, you should have gone back again to 
Munich. If there was one time traveler, there might have been--"

"I keep telling you," Simon said bitterly, "I went back there three times. There were hundreds of them. 
Probably thousands." He took a deep breath. "Listen, we're just going to have to forget about it. They're not going to 
stand for the space-time continuum track being altered. If something comes up that looks like it might result in the 
track being changed, they set you right back at the beginning and let things start--for you--all over again. They just 
can't allow anything to come back from the future and change the past."

"You mean," Betty was suddenly furious at him, "you've given up! Why this is the biggest thing-- Why the fifty 
thousand dollars is nothing. The future! Just think!"

Simon said wearily, "There's just one thing you can bring back with you from the future, a hangover 
compounded of a gallon or so of Marzenbräu. What's more you can pile one on top of the other, and another on top 
of that!"

He shuddered. "If you think I'm going to take another crack at this merry-go-round and pile a fourth hangover 
on the three I'm already nursing, all at once, you can think again."

THE END
CHAPTER I
The Space Wanderer Returns
Hilary Grendon piloted his battered, time-worn space flier, the Vagabond, to the smiling Earth that rose rapidly
to greet it. Only the instinctive ease of long practise prevented a smash-up, his hands trembled so at the controls.
Home again--the old familiar Earth! He could scarcely believe it! Perhaps it was only a dream, and he'd wake
up among the unhuman glittering cylinders of Saturn, shuddering and crawling with the iciness of their fixed regard.
Hilary's eyes blurred with unaccustomed mistiness as he drank in the warm sunlight, the soft green of the grass
and the gracious lines of the slender birches as they fluttered their leaves daintily in the unhurrying breeze. How
different it all was from the harsh red angularities of Mars!
He was outside, breathing deeply, inhaling the perfumed air with delight. This was the only heaven; beyond--
that far-flung immensity of planetary orbs--was hell! He, Hilary Grendon, the carefree, smiling skeptic of old, was a
Fundamentalist now.
How long was it since they had started out on the first flight that man had taken into outer space--he and those
stanch comrades? Five years? God! Had it been so long? Yet here he was, back on Earth again, the kindly, blessed
Earth their eyes had clung to when they were fighting desperately for their lives against the protoplasmic things that
inhabited Ganymede.
Hilary brushed a tear away as he thought of those brave, loyal friends. Dick lay as he fell on Saturn, transfixed
by an icicle dart; Martin had been engulfed in an unholy maw on Ganymede; Dorn was a frozen idol to the spiral
beings of Pluto; and poor Hurley, his fate was the worst of all: his hideously bloated body was swinging in an orbit
around Mars, a satellite through all eternity.
He, Hilary Grendon, was the sole survivor of that tremendous Odyssey!
Hilary shook his head vigorously to clear away the flood of recollections. Enough that he had returned. Then a
sudden eagerness surged through him, a joyous intensity of emotion. What a story he had to relate--how the Earth
people would hang with bated breath upon his adventurings! And Joan--his heart gave a queer leap at the thought of
that slender ardent wisps of a girl with her shining head and steady gray eyes. She had promised to wait for him,
forever, if need be. She had said it simply, without heroics; yet Hilary knew then that she would keep her promise.
A rush of impatience succeeded the inaction of his memories. He must get to New York at once. He could not
wait any longer. Joan first--then Amos Peabody, the venerable President of the United States--to report his return.
He smiled at the stupefaction that would greet him. No doubt he had long been given up for dead. The world had
been skeptical of the space ship he had invented; had, except for a faithful few, mocked at his plans. Indignantly he
had taken his calculations, his blue prints of the spheroid, along with him. If the flight was a success, well and good;
if not, they would not be worth much anyway.
In spite of his fever to be off, he carefully locked the controls, sealed the outer air-lock. Hilary Grendon was a
methodical man: that was the reason he had survived.
Then he struck across country, walking very fast. He knew where he was: in the wilderness of the Ramapos,
some forty miles from New York. Sooner or later, he reasoned, he would strike one of the radiating conveyors that
led into the metropolis, or a human being that would set him on the right track.
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A half hour's sturdy tramping brought him out of the tangled hills into civilization. There was a glitter of metal
and vita-crystal dwellings that stood four-square to the sun and the winds. A broad ribbon-conveyor hurled its
shining length in ceaseless rush down the narrow valley. Human beings--normal homely Earth men with the
ordinary number of legs and arms, with honest-to-God faces and warm living flesh, were seated on the conveyor-
benches as they flashed by. Hilary could have wept with delight. It was two years since he had seen his own kind;
two years since Hurley's tragic misstep through the breach in the air-lock made by a meteor as they were nearing
Mars.
Hilary leaped on the slow-moving ramp, skilfully worked his way across the graded speed belts until he was on
the express conveyor that led straight on to New York.
He sank into a cushioned seat next to an oldish man with iron-gray hair through which the speed of their flight
whipped and pulled. Hilary was bursting for real human conversation again; he grinned to himself at the excited
astonishment of this impassive stranger if he should announce himself. How should he do it? Should he remark
casually without any preamble: "Pardon me for addressing you, sir, but I'm Hilary Grendon, you know." Just like
that, and lean back for the inevitable gasp: "What, not the Hilary Grendon!" And he would nod offhandedly as though he had just taken a little trip to Frisco and back.

He stole a sidelong glance at the sternly-etched profile. The man was staring straight in front of him, looking neither to the left nor to the right. It did not seem as if he were aware of Hilary's existence. So with a sigh Hilary decided against that method of approach as a trifle too abrupt.

"Nice day to-day, isn't it?" The sound of his own voice startled him. English was an alien language to his unaccustomed tongue after the hissing syllables of the Martians.

With pathetic eagerness he awaited the inevitable answer to this commonplace introduction; that he might once more hear normal Earth tones in friendly converse, see the smile of greeting on a real Earth face.

But there came no answer. The man continued staring straight ahead, immobile, fixed. There was no slightest turn to the etched profile. It was as if he had not heard.

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Hilary felt a sudden surge of anger. Damn discourteous, this first Earthman he had met. What had happened to the old hospitality? Had it passed out while he was roaming the spaces? He leaned over, harsh words tumbling for exit, when suddenly he checked himself. There was something strange about that fierce blank stare. The man's face, too, he saw now, was lined and worn; suffering had left its multitudinous imprint upon an ordinarily rotund countenance.

Hilary shouted suddenly: "Good morning." The man did not answer, nor did he stir from his unvarying pose. Deaf! The returned Earthman suffered swift pity. With gentle forefinger he prodded the man.

The reaction was astounding. The man cowered like a pricked balloon; little strangling moans forced themselves out of clenched teeth. Dumb, too! His face jerked around to the direction of Hilary's gentle prodding. Merciful heavens, the man was blind also! Two vacant red-rimmed sockets stared pitifully at him--the eyeballs were gone, ripped out.

But what struck Hilary particularly was the mortal terror that was depicted on the blind man's face. It was as though he expected some cruel, crippling blow to follow; as though it were the last straw on the back of unmentionable former agonies. Hilary shuddered. It was not good to witness such animal fear. A dark shadow blotted out the brightness of the Earth-day for him. There was something wrong here, something that required a good deal of explanation.

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His probing eyes went thoughtfully over the poor cowering wretch. Those careworn features were familiar, somehow. Where had he seen the man before? Suddenly he stiffened, choking an exclamation. The man was bound immovably to his seat. Thin metal links, almost invisible, encircled his feet; held the elbows taut against the fluted columns of the seat-back.

Hilary's space-tanned features hardened; the light gray of his eyes darkened. All the pleasure of his homecoming vanished. The kindly Earth seemed suddenly grown inimical. What had happened in the five long years of his absence? This would have been impossible on the Earth he had known; a man, manifestly the victim of hideous tortures, bound like a wild animal to the seat of a public conveyor.

He went swiftly into action. From the depths of a capacious pocket he fished a sheathed blade of stellite, triply keen; its razor-sharp edge sawed smoothly at the bonds.

In his mounting anger Hilary had paid no attention to the scattering of people occupying the cushioned chairs of the speeding conveyor. But a smothered nearby gasp caused his head to jerk up. He met the incredulous stare of a paunchy, heavy-jowled man seated some chairs away. There was more than incredulity, there was furtive fear in the small beady eyes sunken in folds of fat.

Hilary gave way to unreasoning anger.

"Stop looking like a stuck pig," he called sharply. "Give me a hand with this poor fellow."

The response was surprising. The man got up from his chair precipitately, stark panic written all over him. The sweat oozed from his shiny forehead as he backed cautiously away. He tripped over the edge of the seat behind, and fell. Once more he scrambled to his feet, and as if the fall had released his trembling muscles, he turned and ran, stumbling and dodging across the local conveyors, never once looking back.

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Hilary watched his mad flight wonderingly. "Good Lord," he thought, "does my face frighten people so? Maybe I've turned into a Martian."

He turned to appeal to the others on the conveyor, and received another shock. The few men within earshot were already on their feet and moving away from there with unostentatious celerity. Hilary surveyed their receding backs thoughtfully. What was there about himself to frighten grown men out of their wits? Or was it the poor tortured wretch he was trying to release who was responsible for the exodus?
Already the express was almost clear. He saw the deserters throwing themselves guiltily into seats on the local belts, and then he was carried swiftly past. Only one man remained stubbornly in his seat, some fifteen rows back. He was a huge mountain of a man, a giant upon Earth, and there was a strangeness in his wide stare.

Hilary frowned, then shook his head, and dropped down to his task again. The blind man moaned and jerked as he felt the bite of stellite upon his fetters. Hilary made soothing sounds, forgetful that he could not hear, and worked steadily. There was a little clinking noise and the links that bound the arms fell apart. He attacked the leg shackles next.

There was a tap on Hilary's shoulder, light, electric, yet strangely heavy in its implications. Hilary turned his head sharply, saw the landscape blotted out by a huge overshadowing bulk. Five years in a hostile universe had made him cautious. He pivoted on his heels and rose in a single flowing motion, stellite blade ready for instant action.

CHAPTER II
The Strange Guard
There confronted him the hugest figure of a man he had ever seen. Hilary was not lacking in inches himself—he was well over six feet; but the giant staring quizzically down at him was nearer seven, with shoulders to match. The features of his face were gargantuan in their ruggedness, yet singularly open, while a pair of mild blue eyes, childlike in expression, looked in perpetual wonder out upon the world.

In spite of his annoyance, Hilary instinctively liked the giant.
"What do you want?" he inquired gruffly.

The Colossus surveyed him with his child's eyes.
"Man, you are crazy." He spoke in a deep bass rumble, without emotion or inflection. He was simply stating a fact.

A surge of annoyance swept over the returned wanderer from the far spaces. This was the last straw.
"I may be," he admitted coldly, "but I like my particular form of craziness."
"You know the penalty of course for what you are doing?" the big man inquired unemotionally.

Hilary swore deeply. "Damn the penalties, whatever you mean by that. Here's a man who has been tortured unmercifully—chained like a dog. I intend to free him."

The mild blue eyes contained the hint of a gleam.
"But you know the penalties," he repeated. His murmur sounded like the rumble of a distant earthquake.

Hilary straightened sharply, poked his finger at the midriff of the giant.
"I don't know what you are talking about," he stabbed. "What is the meaning of all this? Who is this unfortunate, and why did everyone disappear as though I had the plague when I sat next to him?"

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A look of bewilderment swept over the massive face, bewilderment tinged with a dawning suspicion of the questioner's sanity.
"You mean to say you don't know?" The tone held incredulity.
"I've just told you so," Hilary pointed out. He felt a growing unease.

The giant eyed him closely. "Man, where on earth have you been these last three years?"
Hilary grinned. "I haven't."
"You haven't?" echoed the other. Suspicion hardened the childlike eyes into cold flame. The man was dangerous when aroused. He thrust his jaw down at Hilary. "If you are jesting with me...." He left the sentence unfinished, but the clenching of a huge fist left no doubt as to his intention.

"I am not jesting," Hilary assured him grimly. "I have been away from the Earth for five years. I've just returned."

The great hand clenched tighter. "Now I know you are crazy, or--Who are you?" he ended abruptly.

"Hilary Grendon."
"Hilary Grendon--Hilary Grendon," rumbled the other in manifest perplexity. It was evident the name meant nothing to him.

This then was the homecoming he had dreamed of in the unfathomable reaches of space. Hilary thought bitterly. Five short years and he was already forgotten. Then the irony of it struck him, and he laughed aloud.
"Yes," he said. "Five years ago I led the Grendon Expedition to explore interplanetary space in the space-ship I had invented. I've come back--alone."

It was amazing to watch long-overlaid memories struggling up through the subconscious. At last the giant spoke.
“Oh, yes,” he said meditatively, “I seem to remember something about it.” He surveyed Hilary with a new interest. “So you were one of those chaps, eh?”

The explorer admitted it, humbly. Of such are the uses of fame.

“Well, now,” said the giant, “that might explain it. Though it sure beats all.” And he shook his head as though he still did not understand.

“Who is that man?” Hilary stabbed a forefinger at the blind man, who sat immobile as before, his worn etched face ever to the front. “It's monstrous. Amos Peabody shall hear of it.”

The Colossus looked at him mildly.

“That,” he said, “is Amos Peabody!”

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Silence lay like a live thing between them. Hilary whirled in a kaleidoscope of emotion. Was this wasted, tortured being the portly, dignified President of the United States who had bade him Godspeed at the start of his tremendous journey five years before? His pitying eyes searched the lineaments of the poor wretch. There was no doubt of it now; it was Amos Peabody.

Hilary gripped his informant’s arm. His voice was deadly calm. “I want the truth about this, and I want it fast.”

“The truth,” echoed the big man with strange laughter; “now that is something--”

His eyes widened over Hilary’s shoulder. With a swiftness remarkable in one of his bulk he shook off Hilary's restraining grip, caught him by the shoulder and thrust him, all in one motion, into a chair several removed from Peabody. In a trice his huge bulk was safely ensconced in the adjoining one.

Hilary’s hand went to the butt of the automatic within his blouse. The giant saw the movement. He leaned forward.

“Don't make a move,” he warned, “the guard is coming.”

“What guard?”

“You'll see fast enough. Appear unconcerned if you value your life. Don't look back.”

Hilary complied. His face became an expressionless mask as he lounged in his chair, but his thoughts seethed and boiled. What terrible mystery had enveloped the Earth during his absence? Why was Amos Peabody tortured and made into a public mockery?

There was a slight whirring noise behind him. Heedful of his companion’s admonition he relaxed in apparent unconcern, but his hand stole once more to the fold in his blouse. His long fingers rested caressingly upon the butt of his automatic. There were still three good Earth bullets in the chamber.

The whirring ceased. There was a slight jar as of something landing on the speeding conveyor. Yet Hilary did not look back, though his grip tightened. A heavy body stumbled toward them, cursing in strange phrases. It passed from behind, came to a halt before the giant. Hilary shot a sharp glance upward from under veiled lids. An exclamation sprang full-throated to his lips, died unheard under a tremendous effort of his will.

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Before them stood a being--it could not be called a man. He was no denizen of the Earth, that was evident, yet Hilary had visited all the planets outward from our own without encountering such a monster.

He hulked before them like a behemoth, even dwarfing Hilary’s companion with his enormous stature; but it was noticeable that he supported his weight ill, as if Earth’s gravitation was too strong for him. Manlike he was in every essential, but the skin of his face was a pasty dull gray, and ridged and furrowed with warty excrescences. Two enormous pink eyes, unlied, but capable of being sheathed with a filmy membrane, stared down at them with manifest suspicion. A gray, three-fingered hand held an angled tube significantly. A lens gleamed transparent in the sunlight from the open end.

Hilary did not move under the stare, nor did his companion. The mild blue eyes were childlike as ever. The guard’s gaze shifted from them to the trembling figure of Amos Peabody. He bent over him, thrust at him with ungentle hand. The automatic under Hilary's fingers crept farther out from the blouse, but a warning gesture from his companion stopped him.

The guard amused himself with shaking the blind man; then he bent suddenly. He had seen the broken links. With ominous deliberation he turned his vast weight upon them. His baleful pink eyes fastened upon Hilary's companion.

“You!” he growled throatily, “what do you know about this?” He spoke in English, but it was obviously not his native tongue.

Mildly innocent was the giant’s face.

“I know nothing, Magnificent,” he said humbly. “I am on my way to Great New York on my own insignificant affairs, and I bother my head with nothing else.”

“The bonds of this dog, Peabody, have been severed,” the guard insisted, “and recently, too. Speak up,
Earthman, or--you know the penalty."

"I know the penalty," he answered respectfully, "but I have been seated here only five minutes, and I know nothing of this Peabody."

The guard fingered his tube.
"Let me see your tag," he said suddenly.

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The other opened his blouse obediently and exposed a thin copper disk suspended on his chest. The guard tugged at it brutally to bring it within range of his vision. The pull jerked the giant's head forward, and the thin metal strand cut cruelly into the back of his neck. Hilary saw a flush of red sweep like a wave up to his forehead, and the mild blue eyes turned hard like glinting blue pebbles. But not a word escaped his lips.

"Grim Morgan," the guard read, "A46823 Great New York. Pah, what barbarous names you Earthmen have."

He shoved the giant back heavily into his seat, and turned his baleful glare upon Hilary.

"You, what do you know about this?"

Grim Morgan interposed hastily. "Nothing, Magnificent. He came on the express conveyor after I did."

The guard's free hand went back. Very deliberately he struck him across the face with three ridged fingers. An angry welt raised.

"That will teach you to keep your mouth shut when not spoken to."

The big man's eyes were mild, but his hands tensed as though they were curled around a throat. He said nothing.

The guard turned to Hilary again. "Answer me," he barked.

"My friend told the truth," Grendon said simply.

"Your tag?"

"I have none."

Suspicion flared openly in the pink eyes.

"Where is it?"

"I never had one."

"Ah!" There was a world of meaning to the exhalation. "You know of course that every Earthman must be registered. The penalty for non-obedience is--death."

The angled tube came up with the swiftness of light. Grim Morgan cried out sharply, lunged out of his seat. Hilary tore at his gun, knowing sickeningly that the draw would be slower than the action of the strange weapon in the guard's hand.

There was a sneer on the monster as he pressed something on the tube. Hilary's automatic was only half out of his blouse. Grim's lunge would never reach in time. He was too far away.

CHAPTER III
The Death of Amos Peabody

Just how any inkling of what was happening penetrated the pain-swept consciousness of the blind and deaf President could never be determined. Possibly a thin repercussion of Grim's cry, possibly an intuition that comes to sense-bereft men. But he had jerked spasmodically erect. There was a sharp tinkling as the weakened leg links broke. He threw himself in a queer, awkward movement forward, directly in the path of the tubed weapon. A blinding beam flashed out of the orifice, sheared through Peabody's middle as though he were cut cleanly in half with a gigantic knife. He toppled in two sections to the floor of the conveyor--released from all humiliation, all suffering.

At the same time two other things happened. Grim Morgan hit the guard like a crashing thunderbolt and Hilary's gun barked once. The monster tottered under the impact. A puzzled expression flitted over his pinkish eyes, a filmy sheath spread over them like a veil, and he fell heavily, a neat bullet hole square between his eyes.

Hilary shoved the gun back in his blouse, and stared alternately at the huddled form of the grotesque being and all that remained of Amos Peabody. The old President had saved his life at the cost of his own. Instinctively his hand went up in formal salute to the gallant old man.

Grim Morgan shook him by the shoulder.

"Man," he said quietly, "we have killed a Mercutian guard. Within the hour we shall be dead men too."

Hilary looked up at him sharply.

"A Mercutian," he echoed. "You mean--"

"That for three years now the Earth has been a conquered province of these devils from Mercury," Grim
interposed swiftly. "We have committed the unforgivable offense and must pay for it."

Hilary glanced swiftly around. The express conveyor was clear of passengers for over a hundred yards each way. All the people within range had cleared off when Hilary had attempted to release Peabody. The small figure of a man got up from his chair beyond the charmed circle, and was threading his way forward. The local conveyors seemed to be moving backward at graded speeds. Beyond was the open country, gradually thickening into scattered rows of crystal buildings. They were in the suburbs of Great New York. Within ten minutes the conveyor terminal would be reached.

Hilary's eyes flicked speculatively to the tiny cigar-shaped boat in which the dead guard had flown down to them. Its smooth gray-gleaming surface was devoid of wings or other lifting devices. Only a fan-shaped fin projected from the stern like the tail of a fish. The cockpit, if such it could be called, was tiny, just ample enough to accommodate the Mercutian's girth. The sunlight dazzled back from a bewildering jumble of tiny lenses inset in the instrument board. Arranged along the hull, on either side, were larger disks of the same quartz-like material.

"Let's get away in the flier," he said.

"Can't," Grim said. "Those lenses you see on the instrument board are the controls. No one knows how to operate them except the Mercutians. Our people managed to capture a few, but couldn't do a thing with them."

Hilary stared at the motionless flier with interest. "What are those round glass disks stretched along the hull in a double row?" he asked. "They look like burning glasses."

"That's just what they are," said Grim sadly. "The top row are sun-lenses, that throw a terrible ray for a distance of two to three hundred feet. Melts everything in its path--men, trees, rocks even. You saw one in action in the sun-tube with which poor old Peabody was cut in half. The lower row of lenses on the flier are search beams."

"Search beams?" Hilary echoed inquiringly.

"Yes. They act like X-rays, more powerful though, and with the further property of rendering everything they touch transparently crystal for depths of ten to fifteen feet. Lead is the only element they can not penetrate. Another secret our scientists can not fathom, so they talk learnedly about the stream of rays polarizing the structure of matter along a uniaxis."

"Can't those lenses be duplicated, and turned as weapons against the Mercutians?"

"No. They are made of a peculiar vitreous material native to Mercury."

"And no one has found out the principle on which they work?"

"Well, there have been theories. We haven't many scientists left, you know. But the most popular one is that these lenses have the power of concentrating the rays of the sun to an almost infinite degree, and then spreading them out again, each individual beam with the concentrated energy of the whole. Some new way of rearranging quanta of energy."

"Hmm!" Hilary's brow was wrinkled. For a long moment he stared and thought.

At last he snapped back to their present situation: the dead guard at their feet, the dismembered body of Amos Peabody, the cowed groups of Earthmen on the speeding conveyors, keeping respectful distances.

"We'd better start moving if we want to get away," he said.

"It's no use," Grim spread his hands resignedly. "We'll have to take our medicine."

Hilary flared angrily. "You're talking nonsense. What's to prevent us from hopping to another platform? There is no other Mercutian in sight."

Grim nodded.

"I know it--they'll expect to curry favor in return."

Hilary felt a web of circumstance tighten around him. His jaw tautened. Thank the Lord he had been away--on his own. He had not the soul of a slave--yet.

"Won't you fight for your life?" he asked the big man curiously.

A spark lit in the mild blue eyes, died down.
"Yes if there were a chance," he said dully. "But there is none. The whole Earth is honeycombed with their guards. They have fliers, sun weapons, invisible search beams. We'd never elude them."

Hilary snorted impatiently. "We have good Earth brains, haven't we? I've traveled all the outer planets and never met any intelligence equal to that of a man, and I won't admit for a moment that the Mercutians are any exceptions."

A man stepped casually onto the express, took one startled look at the dead guard, at them, and fled precipitately back.

"Another one to spread the alarm," Morgan said grimly. "There'll be a dozen guards dropping down on us in the next five minutes."

"Let's get going then." Hilary was pulling the big man along by main force when he heard a movement in back of them. He stopped, whirled, automatic thrusting its blue nose forward.

The little man who had gotten up before on the express was pushing rapidly toward them.

"Stop." Hilary's voice was harsh with command.

But the little man did not heed. He literally stumbled in his haste, crying: "You've killed a Mercutian."

"What of it, my bantam?" Hilary inquired softly, the muzzle of his gun boring into a lean flat stomach. The little man was actually pressing against the automatic in his excitement.

"What of it?" he shrilled excitedly. "God, all this time I've been waiting to find someone with guts enough to smash one of them. Sir, I'm proud to shake your hand."

He reached over the wicked-looking muzzle, gripped Hilary's fist, still tight on the gun butt, and pumped vigorously. He dropped the hand, swerved on Grim.

"And you too, sir." His little fingers were engulfed in a mighty paw. "I saw it all, I tell you," he babbled. "We've got them on the run. We'll sweep the filthy devils clean off the Earth. We'll annihilate them."

"Whoa there, my little gamecock." Morgan grinned down at the excited little man. "One Mercutian doesn't make a Roman holiday. They're plenty more where he came from. You'd better clear out before they come, or you'll be included in the party."

The little fellow--he was not much more than five feet no inches tall--drew himself up to his full height. "What," he ejaculated, "me desert my friends? Wat Tyler's never had that said of him yet. We stick together, to hell and back again."

Hilary grinned as he slipped the weapon back into his blouse. He was beginning to like this little firebrand. In truth, Grim had rather fairly described him as a gamecock. His stature, the bristly red hair that flamed above a freckled face, the lightest of blue eyes that snapped with excitement, the peculiar strut of him.

"You'll do," he said briefly.

At a safe distance a crowd was gathering, a crowd of Earthmen. Grim surveyed them carefully. They were milling back and forth, but no one dared come closer. "Slaves," he grunted, "not a spark left in them." His eyes swept the heavens. Two faint black specks appeared in the blue distance, from the direction of Great New York.

"They're coming for us," he said quietly.

"Let them," crowed the fiery little bantam, "we'll meet them man to man."

He wrenched the tube from the stiffened fingers of the dead guard, swung it exultingly aloft.

"You little fool," Hilary cried sharply, and struck it down again. "We're not waiting for them. That's suicide. Come. I'm afraid it's too late for you to turn back now. You've been seen with us."

He dashed across the moving belts, Grim and Wat, a grotesquely assorted pair, directly behind him.

Passengers, men and women both, scattered at their approach, stark, servile fear smothering their dulled countenances. Cries arose on all sides. "The Magnificents are coming."

The black specks became larger, forming themselves into swift one-man fliers. The three men pelted across the graded conveyors as hard as they could run. No Earthman tried to stop them; one look at their grim faces would have been a most potent dissuader. And fortunately there were no Mercutians within hailing distance other than the rapidly nearing fliers.

They flung themselves off the last slow-moving platform, panting.

"Which way now?" Hilary asked. His quick eye raked the scene for possible hideouts. They were on a smoothly clipped lawn, heaving gently up to a pretty rambling structure, built on an antique design, pleasingly irregular and nestling to the ground as though it were indigenous to the soil. The walls were modern, though, of vita-crystal, which possessed the peculiar property of permitting all of the beneficial rays of the sun to penetrate, and yet presented a perfectly opaque appearance to the outside world.

No other hiding place was in sight. The lawn stretched smooth on all sides except for a scattering of trees--poor
enough cover. The Mercutians were almost directly overhead now, preparing to swoop.

"Our only chance seems to be the house," Hilary answered his own question quietly.
Grim shook his head. "Their search beams can penetrate the vita-crystal walls as though they were transparent glass."
Hilary's heart sank. "Can't help it," he said laconically. "Come on."
The three men broke into a run. It was only a hundred yards, but the Mercutians were coming down fast. They had been seen. A flash as of molten metal gleamed overhead. A blinding ray leaped for the ground, struck viciously a little ahead of the running men. The velvet green grass crisped to ash; the soil underneath scorched.

"Scatter!" Hilary shouted.
Instantly the men spread out. Another blast hissed down at them, so close to Hilary that the heat seared his left side like a red-hot iron. The Mercutians were getting the range. Wat Tyler stopped short with a howl of defiance. He whipped the hand tube he had taken from the dead guard out of his blouse.

"Hide it, you fool!" Hilary yelled back at him. "We don't want them to known we are armed."

Wat obeyed reluctantly. He shook his fist high in the air, and started to run again. It was not an instant too soon, either. A beam slithered down the smoldering air, and the Earth literally boiled under its impact, directly on the spot where Wat had stopped to shake his fist. All about them the terrible rays were slashing now.

But a last desperate burst of speed carried the Earthmen onto a wide enclosed portico, in the old manner. Hilary pounded on the vita-crystal door. It was tightly locked.

"Step back a moment," Morgan rumbled.
Hilary obeyed. The big man spat thoughtfully upon his hands, worked his shoulders tentatively. Then he too retreated to the outermost edge of the portico. Above, the crystal suddenly shattered. Sharp-edged fragments showered down upon them. There was little time to waste.

Grim heaved forward in a slanting rush, right shoulder extended. He crashed into the locked door like a runaway train. There was a grinding noise, a smash of crystal, and his shoulder was through, incased in a halo of bright, sharp edges.

The big man staggered back, his shoulder streaming blood from a hundred cuts. His face was pale and drawn.
"Good fellow," Wat yelled, "even though you are an overgrown ox." He darted in behind the man-mountain like a twisting snake. His deft fingers reached in through the shattered crystal, pressed something on the inside. The door slid into its wall pocket with a sound of grinding glass.

Wat burst into the opened room first, Grim right behind him. Hilary brought up the rear, Grim's great bulk blotting out for the moment any view of the interior.

There was a sudden gasp—a girl's voice.
"Wh--What does this mean?" She was tremulous, yet unafraid.
Hilary stopped suddenly as though brought up against a solid wall. His heart pounded madly. That voice—but it was utterly impossible!
Wat answered, gallantly. "Sorry to annoy you, miss, but they're after us. My partner here's wounded."
"Oh, you poor man." There was quick sympathy in the clear tones. "But who is after you?"

A splintering crash resounded outside.
"The Mercutians, as you no doubt hear," the little man responded with faint irony.
The girl gasped again. "Oh my God!"

There was silence. Hilary strained his ears, yet took care to keep hidden behind Grim's huge frame. What would she do now? It seemed to him as if the whole world depended on her reply.

The girl broke the silence. She had come to a swift decision.
"They must not get you. Go upstairs, quietly, into the chamber on the left of the hall. It's my bedroom. Their search beams can not penetrate it; the walls are draped with lead-encrusted curtains. I'll stay down here and try to throw them off the trail."

Hilary's heart recommenced beating. A gush of joy overwhelmed him. The girl had proven herself.

Grim spoke, for the first time.
"You know the penalty of course, for hiding us."
She did not answer directly. "I can't help it. I can't surrender Earthmen to those beasts. Besides"—there was a catch in her voice—"it does not matter much since—"

Hilary stepped quietly from behind Grim's overshadowing bulk.
The girl's eyes went wide at the sight of him; her slender white hand flew to her throat. She looked as if she had seen a ghost.
"You--you!" she choked. "Hilary!"

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She swayed and would have fallen, had Hilary not jumped to catch her. His heart was beating thickly with excess of emotion. Joan Robbins in his arms again--how he prayed for this moment in the icy reaches of interplanetary space. Yet what was she doing here in Bronxville? Her home had always been atop the windswept Robbins Building in Great New York.

Her hand went softly over his features, as though to assure herself that it was really he.

"Oh, my dear," she whispered brokenly. "I had almost given up all hope. Everyone was certain you were lost--long ago."

Whirrings sounded outside.

"Sorry to break up your reunion," Grim interrupted in his bass rumble, "but the Mercutians have landed on the lawn. They'll be in here right away."

Joan tore herself out of Hilary's arms. Her slim straight figure tautened; her velvet soft eyebrows puckered over deep-lit pools.

"Upstairs quickly, all of you," she cried. "I'll manage them somehow."

Hilary said quietly, "I won't leave you alone with those brutes. You go along up, and I'll remain here." The automatic gleamed in his hand.

"No, no," she panted, "you mustn't. You wouldn't have a chance. Leave it to me." She literally pushed them with her little hands to the stairway. "Go, if you love me."

"The girl's right," Grim said, "there's a chance. If not," he shrugged his shoulders, "we can always come down again."

Outside were heavy thuddings on the portico.

"You in there," a heavy alien voice resounded, "open or we blast our way in." The door had been slid back into position.

There was no room for further argument. Very reluctantly Hilary followed his companions up the winding stairway.

At the top of the stairs an entrance slide showed darker on the left. Wat fumbled for a moment until he found the button. The door whirred open, even as they heard Joan's clear voice below: "Come in, Magnificents!" There was a trampling of feet.

CHAPTER IV

The Kidnapping of Joan

The Earthmen moved quickly and quietly into Joan's room. Thin, crinkly draperies of heavy silk impregnated with lead in colloidal solution, covered all the walls, the door itself. But Hilary shot no more than a cursory glance around; he had left the slide slightly ajar; he was listening intently. The gun was in his hand. There were only two bullets in the chambers--all that were left of the thousands of rounds the expedition had started out with. He must not waste them.

The thick rough voice of a Mercutian floated up from below.

"Three Earth slaves came in here. Where did they go?"

"They did," Joan admitted readily. "They frightened me out of my wits. I screamed and they ran through the house and out the back way."

The Mercutian was suspicious.

"Hmm. Funny there's no sign of a struggle here. Nothing is upset."

"They ran out the back way," the girl repeated tonelessly.

"We'll see; but if you are lying...." He said no more, but the pause was significant in its implications.

"I would not lie to the Magnificents."

"Not if you are wise." He seemed to be the leader. He evidently turned to his companion, for there issued a flood of throaty consonants to which the other grunted once. Then the listeners heard his heavy stamping as he walked through the house to the rear. A door whirred; he had gone out.

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The remaining Mercutian said suddenly: "He won't find them."

"Why not?" Joan asked, a bit tremulously.

The Mercutian laughed harshly. "Because you lied. You've hid them in the house."

Hilary heard Joan's sudden sharp intake of breath.

"No, no, Magnificent," she cried.
The Mercutian laughed again—a hard cruel laugh. There was no mirth in it.

"All Earthwomen are liars. I know where you hid them. In your bed chamber. The trick is too old already. We may not be able to see through the lead curtains, but we can break down the door. I warned Artok not to permit the use of the lead curtains, but he has a soft streak. He listened to the women's pleadings for privacy. Privacy, pah! A cloak for conspiracies, that's all it comes to. When Gurda returns, we search upstairs and drag out your rats from their hole."

He laughed smugly, pleased with his own cleverness.

"It is not so." Strange how calm Joan sounded. "They are not in the house. Only my dying mother is here. She is bedded upstairs. The doctor ordered absolute quiet. The slightest noise would be fatal."

The Mercutian sneered. "We'll take a look at that dying mother of yours right now."

"You mustn't," the girl panted. "She will die, I tell you."

"And what does it matter to me?"

There was the sound of a struggle, a sharp cry, followed by a dull thud.

* * * * *

Hilary was out through the door like a flash, down the corridor to the head of the stairs with automatic extended. The monster Mercutian was coming heavily up the treads. They saw each other simultaneously.

The Mercutian's pink eyes turned a vicious red; the tube dangling in his hand jerked sharply up. Hilary squeezed the trigger. The gun barked. The Mercutian spun half around with the force of the tearing bullet. The deadly beam from his weapon slithered over the wall, searing a great molten gash in the crystal. He was badly hurt, but he did not fall. Howling with pain and rage, he slewed himself around again, pointed his sun weapon unsteadily upward.

Hilary let him have the other slug. The big body jerked, and fell backward with a crash to the bottom of the stairs, there to lie oddly contorted and still.

There was a thundering rush from the rear of the lower floor, a hoarse throaty cry. Hilary tore down the steps three at a time, Grim and Wat slithering behind him.

The other Mercutian was bending over Joan's semiconscious form, sweeping her into the crook of a huge arm. He shot a startled glance at the down-pouring Earthmen, swerved the girl around, and aimed his tube.

Hilary pulled the trigger as he swerved. There was a sharp click, but no explosion. Hilary cursed and threw himself down. He had forgotten that there were no more bullets. The speeding flash scorched overhead.

Grim and Wat crouched low. Wat's tube, the one he had wrested from the dead guard on the conveyor, was being slowly raised. The Mercutian saw it, shifted the inanimate girl in front of himself, and backed stealthily toward the splintered door.

"Don't shoot," Hilary cried sharply. "You'll kill Joan."

Wat lowered the tube disgustedly. Hilary groaned aloud. If only he had had one more bullet. There was enough of the gigantic body exposed to offer an excellent target to a steel slug without harming Joan, but the sun weapon sent out its beam in a flat spray.

The mercutian sensed their dilemma as they crouched on the stairs. He laughed unpleasantly as he backed through the doorway, Joan's limp body held straight in front of him.

"Good-by, Earth slaves," he taunted. "I take your pretty Earth maiden with me. In five minutes I return, with others. You cannot escape. Good-by."

He jumped clumsily through the door. The crouching Earthmen heard a click. It had closed behind him.

* * * * *

Hilary and his companions cleared the stairs in almost a single bound. He had snatched the sun-tube out of Wat's hand. Through the splintered slide he saw the Mercutian climbing into his flier, but a great crystal column of the portico intervened. Nevertheless, while Wat fumbled for the button that released the slide, he took a chance. Every split second was precious now. He aimed the weapon, pressed the spring. A white dazzling ray darted fanwise from the orifice. It touched the column, fused it into molten, running glass. But the Mercutian was already in his seat, Joan limp beside him. He was fumbling at the controls.

The door slid open at last. Hilary shot through like a bullet from a rifle. The flier had already taken off on a long slanting rise. A three-fingered hand waved mockingly down at him. Hilary raised his weapon, then lowered it with a groan. The flier was well within range yet, but if he aimed the terrible beam at it, there would be a crash of fused twisted material, and—Joan was in it. What a dilemma! If he didn't shoot, she would be borne away—he dared not think to what horrible fate.

Grim's hand rested lightly on his shoulder as he watched the flier become a faint black speck in the direction of Great New York.

"She was your sweetheart." His gruff voice was oddly gentle.
Hilary brushed a weary hand over his forehead. The Earth, the universe itself, were suddenly dead, meaningless gobs of matter.

"Yes," he said tonelessly. "Five years ago she promised to wait for my return. She kept her word. I found her again--only to lose her."

Grim said quietly: "I too once loved a girl. I joined the last rebellion under Amos Peabody. The Mercutians threatened to seize the wives, sisters, sweethearts of the revolters if they persisted. Many of the men surrendered. I was one of those who refused. When the revolt was over, smothered in flame from their giant sun-tubes, I found that they had made good their threats. My girl was gone, vanished. Two Mercutians had taken her away. She was never found again."

He paused in brooding silence. "They are up to their old tricks again." His eyes were steely blue now. Hilary pressed his hand in silence. They were welded together by a common loss.

Wat Tyler broke in upon them. "If you fellows want to hang around here, I'll be on my way. That Mercutian hyena will be back here with a dozen others just like him in less than no time."

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Hilary snapped out of his sorrow. He could not help Joan by having himself captured or killed, nor was it fair to Grim and Wat. They had placed themselves unquestioningly under his leadership. Something else too was growing into burning life in his mind. This was his Earth, his and Grim's and Wat's, and of millions of other normal human beings. The Mercutians were interlopers, brutal conquerors. He would devote his now otherwise meaningless life to driving them off the planet, wiping them out of the solar system. A tall order, yes, but not for nothing had he fought almost single-handed against those other monstrosities on other worlds: Martians, Ganymedans, Saturnians. The Mercutians were no stronger than they. Besides, there was Joan.

"Men," he said crisply, once more the clear-headed commander of his space expedition, "I intend to fight these Mercutian invaders until Earth is free once more, or--I am dead. I have no illusions about the magnitude of the job, of its practical hopelessness. But that does not mean that you two have to throw away your lives also. I am a marked man, without any identification tag. You on the other hand, can get away from here, mingle indistinguishably with the hordes of people in Great New York. You would be safe. Our ways part here, if you desire it so." He added hastily, "I would be the last to blame you."

Grim Morgan and Wat Tyler looked at each other, a great giant of a man and an undersized bantam. Yet some electric spark of sympathy seemed to dart between them, these so dissimilar beings.

Wat elected to be the spokesman. His voice rose shrilly, as it always did when he was laboring under stress of excitement or emotion.

"You won't blame us," he almost squeaked. "Who asked you? Damn it, haven't we consciences of our own? Are we quitters, yellow-bellied Mercutians to quit a pal? Are we, Grim Morgan? Speak, you big ox."

He wheeled abruptly and shook a small fist high in the air. It barely reached under Grim's nose. The big man looked down at the little gamecock unsmilingly.

"No, Wat Tyler, we are not," he said gravely.

Wat turned to Hilary triumphantly.

"There, you see," he crowed, "we stick together. We'll lick those Mercutian monsters; we'll sweep them into the ocean, into space. And what's more, we'll rescue your girl too." He stopped to catch his breath. Grim was nodding slowly. He had not the little man's exuberance. His girl could not be rescued any more, but he could remember.

Hilary's frozen heart warmed into life again. With loyal comrades such as these, even the impossible might be accomplished. Very quietly, without heroics, the three men shook hands. Nothing more, yet they knew that they were bound indissolubly together, as long as there was a gasp of breath in any of them.

* * * * *

Hilary's brain functioned with racing smoothness. In minutes the Mercutians would be back.

"We must find a secure hiding place at once," he said. "Know of any?"

Grim shook his head negatively. "There is none," he spoke slowly. "Their search beams penetrate everything."

"Except lead," Hilary interposed.

"Except lead," he conceded.

"Very well then. We shall have to find a place we can line with lead. In the meantime. I have my space flier up in the Ramapos. If it hasn't been discovered yet, it will be essential to our task. We'll have to get there quickly."

"How?" Wat asked,

"By the conveyors, of course."

"No good," the little man declared. "Mercutian guards will be patrolling them. You have no identification tag. You would be caught."

Hilary considered that. "Suppose you two go on along," he suggested. "Find it and wait for me. I'll manage
somehow."

"No," they answered unanimously; "we go together or not at all."

Hilary did not try to argue. He would have replied himself in exactly the same terms. He looked longingly at the abandoned flier of the gray-faced Mercutian, lying cold and still within the house.

"If only we could operate the ship," he said.

Then, characteristically, he dismissed the vain longing and bent to the business in hand. "That means we'll have to make it on foot, and keep under cover all the way. Come on."

As the three men moved rapidly over the great lawn toward the nearest covert, a little wood a quarter of a mile away, the horizon that was Great New York showed silhouetted against the westering sun numerous little black dots. The Mercutians were coming.

CHAPTER V
Outlaws of Earth

Three days later three footsore, weary, hungry men skulked in the edge of the woods near a little clearing in the Ramapos. For three days they had ducked and dodged and literally burrowed into the ground by day, traveling only at night. Above and around them the noise of pursuit rolled. The Mercutians were persistent.

Speedy one-man fliers patrolled the airways, their search beams casting invisible rays in wide sweeping arcs over the uneven terrain. Wherever they touched, the ground sprang into vivid illumination, crystal clear to depths of ten to fifteen feet. Several times the crystal swath swept breathlessly close to the place where the fugitives crouched in covert. The conveyors carried back and forth armed companies of guards. The Mercutians were making a mighty effort to capture their prey.

But somehow the Earthmen had won through, and eager eyes searched the little glade. Hilary exhaled sharply.

The Vagabond, stanch and faithful companion of all his travels, rested immovably on the deep green grass. It had escaped the questing eyes of the Mercutians. The travel lanes did not touch this secluded spot.

"So that's your space ship, eh?" said Grim, surveying the tarnished, pitted spheroid with something of awe.

"Yes," said Hilary lovingly as he unlocked the outer port side. A hasty glance around inside showed that nothing had been touched. Everything was orderly, methodical, just as he had left it.

Grim and Wat examined with interest the banked controls, the polarization apparatus that set up repulsion waves and literally kicked the ship out into space away from the planet against which it had been set.

"Time enough to inspect," Hilary warned them. "Never can tell when those damned Mercutians may spy on us."

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He set the polarization controls so that the mere pulling of a switch would send the flier careening off into space. He surveyed the apple-pie order of the interior with vast satisfaction.

"Now let them come," he said, "the Vagabond can show anything that flies a clean pair of heels. Let's eat."

He dragged an aluminum box out of its locker, opened it to disclose a gray funguslike mass. He cut off huge slices and offered it to his companions.

They looked at it doubtfully.

"Ugh," Wat shuddered violently, "I never saw stuff like that before. It doesn't look good." The little man, they soon discovered, had violent discriminations in food.

"Try it." Hilary assured him. "It's a Martian growth, and delicious. We had to live on the land so to speak, on our journey. Our Earth food gave out long before the finish."

Wat looked at it with manifest distaste, but Grim was already wolfing his portion and making little pleased sounds. Wat bit into a portion gingerly, found it tasted somewhat like truffles, and soon was not far behind in gulping it down.

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When their appetites had been appeased, Hilary called a council of war.

"First of all," he told them, "we'll have to find a hideout. That presupposes two things: a place large enough to store the Vagabond, and hidden from view, either from the naked eye or their search beams."

"That sounds like a large cavern lined with lead," said Grim.

"Exactly."

"And there are none such in this territory," Grim replied quietly.

"I will not move too far from New York," Hilary spoke with determination; "there is Joan...."

Grim looked blank. There was Joan, of course.

Wat got up suddenly. "I know a place," he said, "within a mile of here, and it's not a cave. Come on; I'll show
you. I was a Ranger in the Ramapo Game Preserve in the old days."

Hilary asked no more. The polarization switch made contact, and the Vagabond left the Earth with a swift rush. It maneuvered with the ease of an Earth flier. Wat directed him, scanning the rugged tree-clad mountains with eager eye.

"There," he said finally, "set her down right there. Easy."

Hilary saw no break in the uninterrupted line of the mountain, but he followed directions. He had come to have an abounding faith in the little red-haired man.

The space flier eased gently down. Just as it seemed as if it would perforce come to rest upon serrated tree tops, a faint glimmer showed amid the darker green. There was an opening, just barely room for the Vagabond.

Hilary jockeyed skilfully through, kept on descending into a narrow cleft in the slope. The walls rose almost perpendicularly on either side. About fifty feet down there was a sharp turn and the gorge angled downward for another fifty feet. When the flier came to rest at the bottom, it was securely hidden in a slanting cleft, some forty feet wide and several hundred long. A mountain brook brawled at one side, assuring plentiful water. The outside world was absolutely invisible. Perpetual twilight reigned; only a pale dim religious light filtered through.

"Just the thing," Wat exulted. "We'll never be found here, no matter how much they search, unless someone actually stumbles into the opening. There's almost eighty feet of solid rock above us, and their search beams only penetrate about ten to fifteen."

"Splendid." Hilary said. "Now we've got to get to work."

For two days they toiled incessantly. A rope ladder was fabricated to insure ease of entrance and exit without recourse to the ship. Wat, as the least conspicuous, was delegated to scour the countryside and bring in stores of provisions. The bottom of the gorge was leveled off with infinite labor. Rough wood shelters were erected. Spares and electrical equipment to replace worn parts in the Vagabond were also purchased by Wat, in cautious small purchases. It necessitated long trekking through mountain trails, but there was no murmur from him. The search, he reported, seemed to be slackening. Only the routine guards whizzed by on the conveyors, and the usual Mercutian fliers that kept to the regular air lanes.

At last even Hilary was satisfied. He was ready now for the plan that had been slowly forming in his mind during the days of their flight and of work. He was going to attempt a rescue of Joan. She had never left his thoughts once; he was burning with inward anxiety, though his face was a mask to cover his true feelings.

The last evening he sat with the others within one of the wooden shelters. A huge fire of fragrant pine knots blazed up a crude boulder chimney.

"I am going out now to find Joan," he told them quietly.

"When do we start?" asked Wat.

"I am going alone." There was a movement of protest. He checked it at once. "You can understand the reasons. One man can worm his way where three men cannot. It isn't a question of force, of brute strength. Besides, if anything should go wrong, there are still the two of you to carry on--to be the focus of a new revolt. If all of us were caught, there would be no further hope for the Earth."

"It's a hell of a note," Wat grumbled, unconvinced. "There's fighting to be done, and me cooped up here like a sick hen."

"Hilary's right," Grim interposed thoughtfully. "It's a one-man job. We'll have our chance later." He turned on Hilary. "But if anything does happen to you, you understand we won't stay quietly. We'll come--if you are still alive. Promise you will let us know--if you can."

"I'll promise that," Hilary agreed. "There is a way."

He got up and went out of the hut. In a few minutes he was back, holding three small flat disks enmeshed in a spray of fine wires for them to see.

"I've just removed the communication disks from our space suits. Strap them in position on your right shoulder blade, hook the wires--so--and you can talk to me or to each other over distances of one hundred miles. Underneath your clothing they cannot be seen. Should I require your assistance, I'll call, and further, I'll show you both how to run the Vagabond, in case...." His voice trailed.

"Yes, yes, of course," Grim interposed hastily, "but you'll be here to run it when the time comes."

"Perhaps," Hilary smiled faintly. Then he leaned forward. "I've gotten a pretty good idea of what's happened on Earth since I went away, but now I need more details. Otherwise I'll run into things that will surprise me, and that might not be so--pleasant."

They told him, interrupting each other, arguing over details, Hilary interposing questions every now and then.

* * * * *
About a year and a half after Hilary's departure into trackless space, a huge flat diskoid came hovering to the ground near Great New York. It carried a party of Mercutians on a friendly exploration, so they said, once communication could be established between Earth linguists and themselves. They were welcomed, made much of. They seemed friendly enough. At their own request they were whirled over the Earth in Earth planes on a tour of inspection.

When they departed, with much protestation of friendship, they assured President Peabody they would return some day, they and others of their race. Just what hidden threat there was in that promise, no one on Earth realized. It was taken at face value.

Just a year later, almost to the day, the by this time familiar diskoid was seen hovering once more over Great New York. The Mercutians were returning. The people of New York suspected nothing. No troops were rushed to the scene to repel invasion; no guns were trained on the space ship. It was just another friendly visit, and hurried preparations were commenced for a rousing welcome on their landing.

What New York did not know was that simultaneously with the appearance of the Mercutian flier over their city, a hundred others were even then hovering over the strategic capitals of the world. The first Mercutian ambassadors had put to good advantage that hurried tour of inspection.

No one was alarmed. Each capital city thought itself signally honored by the reappearance of the lone Mercutian over it. The plan was clever, the timing perfect.

At a signal flashed through the ether, things started happening.

The great diskoids, hovering high in the stratosphere, suddenly blazed into blinding light. To the dazzled onlookers below, a new sun seemed to have been born. A truncated cone of flame leaped downward. The diskoid was the apex, the spreading base all of Great New York. The sheeted brilliance enveloped the doomed city. It was a holocaust. New York became a roaring furnace. Stone and steel heated to incandescence.

The affrighted people had no chance for their lives. Like moths in a flame they died on the streets, in the ovens of their homes, in the steaming rivers into which they had thrown themselves to escape the awful heat. There were few survivors, only those who happened to be inside the giant skyscrapers, protected by many thicknesses of crystal and steel.

As Great New York went, so went a hundred other cities. The Earth was caught unawares, but the governments, the people, responded nobly. Troops were mobilized hurriedly, preparations rushed for warfare.

But the Earthmen did not have a chance. The great sinister diskoids moved methodically over the Earth, high in the stratosphere, where the futile Earth planes could not reach them, and sent the terrible blaze of destruction down unerringly upon armies, cities, towns.

It was over soon. One after another, the Earth governments capitulated. America was the last--old Amos Peabody vowed he would rather go down to utter destruction than yield--but he was out-voted in Council. It was pure slaughter otherwise, without a chance to fight back.

At once the Mercutians set up their government. The Earth was turned into a colony. The leader of the invaders, the son of the Mercutian emperor, became Viceroy, with absolute powers. Sooner or later, it was their intention to transport the entire Mercutian race to the Earth, and make it their permanent home. Mercury was not an ideal place to live on; in the restricted area around the poles where life was possible, terrific storms alternated with furnace droughts, to which the hottest part of the Sahara was an Arctic paradise. No wonder the first Mercutian expedition had broached the subject of Earth as an easy conquest when they returned.

The Mercutians treated the Earth people as slaves. Their rule was brutal and arrogant in the extreme. The Earth people revolted, under the leadership of Amos Peabody. Weaponless, except for small hidden stores of rifles and revolvers--the Mercutians had cannily disarmed their slaves--they fought desperately with axes, knives, clubs, anything, against the overlords.

The result could have been expected. The rebellion was smothered in blood and fire. The bravest of the Earthmen died in battle, or were executed afterwards. The slaves, the weaklings, were left. Old Amos Peabody was treated as Hilary had seen. He was exhibited in city after city as a public warning.

Hilary's blood was boiling as the terrible narration went on and on. But his face was calm, immovable.

"How do the diskoids operate?" he asked.

"Something like the sun rays on the one-man fliers," Grim told him, "only vastly more powerful. They are not limited in range, for one thing. It took only one, fifty miles up in the stratosphere, to destroy all New York. I saw the one that first spied on the Earth. It was about five hundred feet in diameter, made of the same vitreous material, and shaped like a huge lens. No doubt, besides being a space ship, it is just that. The sun's light flashes through it, is rearranged into terrible burning rays, and sears all in its path."
"Hm'm!" Hilary meditated. "So everything the Mercutians have in the way of weapons and armament depends directly on the sun's rays."

"Yes," Grim agreed. "After all, you must remember that with Mercury exposed as it is to the fierce heat of the sun, it would be only natural for them to develop weapons that utilized its rays."

"Then the tubes and the fliers cannot operate at night?"

"Yes, because then they receive the reflected waves from the diskoids that are stationed out in space, in eternal sunlight."

Hilary considered this a moment.

"Where do you think it possible Joan was taken?" he changed the subject abruptly.

"It is hard to say," Grim answered slowly. "But your best chance would be with the Viceroy himself. There have been rumors--when pretty girls disappear."

Hilary's jaw set hard.

"I think I'll interview His Mercutian Magnificence," he said. "Where are his quarters?"

"The Robbins Building."

"Good Lord, that's Joan's...." So that was why Joan was up in the Bronxville suburb. "What happened to her father, Martin Robbins?"

"Executed after the revolt," Wat interposed. "Your girl must have escaped, otherwise she'd have been treated then like the other girls whose relatives had fought."

Hilary smiled unaccountably, the first smile since Joan had been taken. He knew the Robbins Building well; he had been a frequent visitor there in the old days. There were surprises in store for His Nibs the Mercutian....

CHAPTER VI

Mutterings of Revolt

The next morning, as dawn burst over the mountain tops, he started on his perilous mission. But no one who knew Hilary Grendon would have recognized him in the meek, shambling, slightly bent Earth slave who climbed the last rung of the rope ladder out of the hidden gorge.

He had changed his clothes for an old, space-worn suit that one of his former comrades could never have any further use for. The skilful application of wood ash and powdered charcoal to the hollows around the eyes, the pits beneath the cheekbones, gave him a gaunt, careworn appearance, suitable to an Earthman too brow-beaten to dream of defying his overlords.

Wat, who had artistically applied the make-up, viewed his handiwork with admiration. "You'll do," he grinned. "The way you look, even a little fellow like me would be perfectly safe in spitting upon you."

Before he went, he explained the mechanism of the Vagabond thoroughly to his friends. Finally they nodded; they would know how to work the controls.

There was the question of weapons. The captured sun-tube was out of the question; it could not be secreted beneath the dark-blue blouse. Hilary fondled his automatic wistfully.

"If only I had some bullets," he sighed.

"Hell, man, I know where you can get plenty," said Wat. There was a hidden cache, not far from where they were, stored against the day. There were still some brave spirits left on Earth who hoped and plotted. Wat had been one of them. Hilary's spirits rose immeasurably. With his gun loaded he could face the whole Mercutian planet.

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Hilary made the return journey to Great New York in an hour. He wormed his way carefully to the nearest conveyor, and made his way openly to the express platform, secure in his disguise.

There was an air of unrest, of tension in the air. The Earth passengers no longer sat dully, apathetically, as they were whizzed along. Little groups buzzed together, excited, gesticulating.

Hilary unostentatiously joined one. There was a sudden silence as he sank quietly into his seat, glances of uneasy suspicion. But he looked thoroughly innocuous, and the chief whisperer felt emboldened to resume the thread of his interrupted discourse.

"There are men left on Earth," he mouthed secretly to the little circle of heads. "The Mercutians went down like animals--fifteen of them killed, I hear. The whole company of guards retreated in a hurry"--he paused for greater effect, and continued slowly and impressively--"from--three--Earthmen."

Hilary raised his head sharply. They were discussing his exploit, evidently. With exaggerations of course. That was inevitable.

"Yes, sir," the speaker proceeded, "that shows you. These damned Mercutians are not invulnerable. They can be overcome, chased off the Earth. But we've got to be men, not slaves."
High excitement shone in the surrounding faces.
"But we ain't got no weapons," a small, weak-chinned man protested.
The other spat carefully: "No weapons, huh? Man, I could show you--"
A dark, silent man standing uninterestedly next to him jabbed him in the ribs. The orator gulped and stammered: "I--I mean--"
"Psst," someone hissed hurriedly, "the Mercutians."

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Three giant Mercutian guards, their sun-tubes at the ready, stumbled heavily down the aisles of the express, sagging with the pull of Earth's gravitation. Their gray, warded faces were black as thunderclouds.

They stopped before the hastily scattered group.
"You heard the orders," the hugest one barked: "no congregating of Earth slaves on the conveyors or elsewhere. Next time you disobey, I'll ray you. You understand?"
"Yes, Magnificent," the weak-chinned man muttered hurriedly.
But the little knot reformed immediately after the guards had passed on.
"Magnificents!" The first speaker spat viciously. "I'd like to wring their necks."

Hilary shifted unobtrusively to another excited cluster. There the same procedure was followed. A quiet-voiced man was talking, lauding the exploit of the three embattled Earthmen, skillfully and subtly enkindling enthusiasm, raising wholesome doubts as to the invulnerability of the hated Mercutians.

Numerous patrols of guards stalked up and down the conveyors, arrogant, manifestly itching for a pretext to ray the conquered. But the Earthmen gave them no opportunity. The groups melted at their approach into meek, vacuous individuals; reformed instantly as they moved on. And there were no informers. The Earthmen had resumed their almost forgotten Earth solidarity in fronting the invaders.

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Hilary watched the restless shifting groups with a glow of pride. This was his work, the spark he had kindled was being fanned into a steady blaze. These whisperers, these exhorters, who were they? Members of an underground organization? Possibly. Wat and Grim had both belonged to loose circles, vague and shifting in membership. Possibly they were coalescing now, joining up into a world-wide organization. He hoped so. It would make his task easier, it also helped restore his pride in being an Earthman. He had almost thought that this supine listless race of his was not worth rescuing.

He reached the terminal in Great New York without untoward incident. No one challenged this meek, shabby-looking Earthman. The Mercutians gave him barely a glance; the Earthmen disregarded him when they whispered together. Hilary was content; he was not seeking undue notice.

The terminal was the scene of unwonted activity. The conveyors were disgorging crowds of Earthmen, grim, determined-looking individuals. They scattered purposefully through the various exits of the huge building. Hilary noted with interest that there were no women, no children, on the constantly incoming expresses.

The Mercutians were massing, too. The terminal was crowded with guards. They stalked heavily about, shouldering their Earth slaves rudely out of the way, sending them sprawling with sudden quick shoves. It would take only an untoward word, a false movement, to start a massacre. The Mercutians were deliberately trying to egg them on.

But the Earthmen took the abuse, the physical violence, quietly. They picked themselves up, disappeared through the exits, giving way to new arrivals. Once Hilary caught a gleam of familiar steel in the unbuttoned recess of a man's blouse pocket. He smiled. There were untoward events impending.

But first he must take care of his own private matter. Joan was a captive in the hands of the Mercutian Viceroy. What was his name? Wat had told him. That was it--Artok.

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He was out in the street now, a wide vita-crystal paved thoroughfare, one of the many that radiated from the terminal like the spokes of a wheel. On either side was an upflung spray of tall receding towers, dazzling in the sunshine.

It struck Hilary suddenly. There had been bright unclouded skies during the days since his arrival. Only at night had it rained, like clockwork: every night for fifteen minutes immediately after midnight. A light steady shower that ceased as suddenly as it sprang up. It was unusual. This was April in the Spring of 2348 and April was always a month of showery heavens. Had the Mercutians, accustomed to the blazing light of their own planet, deliberately managed some way to create perpetual sunshine on Earth? Very likely, considering the clockwork night showers, no doubt for the purpose of preventing droughts. There was the matter of weapons and power, too. They all depended on the sun.

Hilary took the inside moving platform. It would take him to the Robbins Building. The street was black with
people, surging back and forth, restless, ominous.

Mercutians stalked purposefully along, in companies of ten. Their guttural voices were harsh with command. The Earthmen scattered out of their way. Those who were not nimble enough were knocked down, trampled underfoot.

One Earthman, braver than the rest, or more foolish, gave vent to a scream of rage, when a young girl, with whom he was arm in arm, was wrested brutally away. His fist shot out, caught the leering guard flush on his chin.

The Mercutian staggered, then bellowed with rage. His tube flashed upward. The Earthman's eyes opened wide as with wonder, then he collapsed, cut cleanly in half.

There was a full-throated growl from the jammed thoroughfare, a sudden surging forward. But the guards, reinforced by others, had their tubes lifted, ominous, death-dealing. The crowd ebbed back hastily.

Hilary had joined the first rush. His blood pounded in his veins at the unprovoked brutality. For a hasty moment he visioned the commencement of the revolt. But as the mob retreated before the weapons, his brain cooled. The time was not ripe yet. It would be pure slaughter. Besides, there was Joan.

Once more he was the meek, downtrodden slave. He got off the platform, shambled over to the Robbins Building, an imposing pile of vita-crystal. It rose high into the air, overtopping even the great Memorial Tower. Martin Robbins had been wealthy, very much so. He had been a physicist of world repute, and this building was a monument to his inventive genius. The top floors were devoted to marvelously equipped laboratories. On the roof were the living quarters--dwelling of many rooms surrounded by an alpine garden. All Great New York stretched beneath. In the distance the green waters of the Atlantic dazzled in the sunshine.

Hilary knew the layout well. It had been his second home before.... He put the bitter thoughts determinedly behind him. There was work ahead. The stooped, hollow-cheeked creature shambled aimlessly up to the entrance. It was filled with Mercutian guards.

He edged his way along, hoping to pass through unnoticed.
"Here, you," a burly Mercutian barred his way, "get out of here before I ray you."

Hilary seemed to shrivel together in mortal terror. He turned to slink out again. The guard had him by the shoulder, was propelling him with ungentle paws toward the exit. Hilary let himself be shoved.

A cold curt voice spoke a sharp command:
"What have you there?"
Where had Hilary heard that voice before?
The pushing guard spun him around hastily.
"He was trying to get into the building, Cor Urga," he said respectfully. "These damned Earth slaves are everywhere under foot. It's time we rayed a few to teach them a lesson."

Hilary found himself gazing at the gray saturnine countenance that had burnt itself into his memory. Urga--the Mercutian who had kidnapped Joan! His muscles tensed suddenly for a quick spring, then relaxed. He must play the game.

Urga looked him over carefully, puzzled.
"Strange," he grunted, "I've seen this fellow before, but I cannot remember where."
Hilary was taut. Would he be recognized?
But the Mercutian Cor--in Earth terms, Captain of a Hundred--shook his head finally, and turned away. The disguise had held up.
"All these Earth slaves look alike. This one is a particularly poor specimen. Turn him loose. If he tries to come in again, kill him."
"Get," the guard growled viciously, and sent Hilary sprawling out into the street to the muttering accompaniment of the seething Earth crowds. The temper of the people was rapidly reaching the explosion point.

But Hilary picked himself up, meekly brushed himself off, and melted unostentatiously into the moving crowd. He desired no undue attention.

Strangely enough, there were no Mercutians in sight. Only the surging, growling Earthmen. Hilary felt their mysterious disappearance to be ominous--as though they had been warned by some secret signal. Something terrible was about to happen. He must get to that certain passageway he knew, and quickly. If only it were not guarded.

A cry went up about him, a yell of many voices.
"The Mercutians are coming."

Hilary whirled. Down the street, issuing from the terminal, deployed a full regiment of guards, bowed under the strong pull of the Earth, but formidable enough. Sun-tubes glinted dangerously. A stentorian voice reached him.
"Clear the streets, you Earth dogs," it roared. "You're been warned enough. One minute to obey and I'll burn you all down."

A babel of excited voices went up. The crowds farther down, near the advancing Mercutians, melted into a wild scramble. Men trampled each other underfoot in a mad attempt to reach safety before the minute's expiration.

Where Hilary had paused, there was a milling indecisiveness. Men were already quietly edging their way toward adjoining buildings, into side thoroughfares; others were more belligerent.

"Kill the bloody beasts!" a man suddenly screamed near Hilary, drawing a pistol from beneath his blouse. He waved it frantically in the air. There was an ugly surge, a low-throated growl. It needed very little for the mob to get out of hand and hurl itself upon the steadily approaching Mercutian regiment.

Hilary acted swiftly. He caught the man's pistol arm, thrust it down sharply out of sight. A quick wrench, and the gun was in his own hand. The man, wild-eyed, opened his mouth to shout.

"Shut up," Hilary hissed fiercely. "Are you mad? You wouldn't have a chance. They'd ray us all clean out of existence." He thrust the pistol back into the man's blouse. "Wait; our chance will come."

"Oh, my God! Look!" someone screamed.

A command shattered the air; the tubes of the Mercutians uplifted; a blinding sheet of flame blazed solidly down the street. The minute's grace was up.

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Even at this distance, the heat scorched and seared. There were many unfortunates caught farther down, men who had had no chance to seek safety in time. They melted in the furnace blast as though they were bits of metal in an electric arc.

"Run for your lives!" the shout went up. All thought of resistance was gone. It was every one for himself. The man with the gun was the first to run. Hilary found himself caught in the mad rush. The Mercutians were pounding along methodically raying in front of them.

Hilary was thrust into a little eddy of men to one side. It swirled and shoved. The entrance of the Pullman Building loomed ahead. The sight of it gave Hilary new vigor. That was his destination. If only he could make it.

He straightened out of his stoop, squared his shoulders. The next instant a human battering ram crashed through the twirling, yelling mob. Head down, right shoulder and elbow working in unison, a path magically opened where no path had been before. Every second was precious now. The heat of the tubes was engulfing him in waves, raising little blisters on the unprotected skin.

Hilary plunged into the open entrance of the Pullman Building. It was packed with humanity, struggling for the lift platforms, to take them to the upper stories, out of reach of the awful rays. Hilary was thankful for that. His destination was beneath, in the sub-levels. A moving escalator led downward. It was deserted.

A fierce, wild screaming arose outside, screams that gurgled and died horribly. Hilary felt sick inside. The full blast of the rays had reached the milling crowd. It would be a hideous and merciless slaughter.

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Hilary's gray eyes burned, his lips set in a straight, hard line. The beasts would pay for this. He shot down the escalator at full speed. A spray of passageways met him. He did not hesitate. He chose the one farthest to the left and dashed along its winding length until he came to a dead end. The vita-crystal gleamed blankly back at him.

But Hilary knew what he was doing. Long ago Martin Robbins had told him of the secret connection between the two adjoining buildings. A passageway that led between the outer and inner shells of crystal walls; lifts that shot smoothly to the laboratories and pent-apartments on the roofs of the two structures. For Simeon Pullman had been a close friend of Robbins; a fellow physicist, in fact. They interchanged theories, results of experiments, and found this swift connection most convenient.

Both men were dead now—Pullman as the result of a premature explosion, and Robbins, executed by the Mercutians. But the secret passageway remained.

Hilary pressed the secret spring he knew of. A gleaming oblong of crystal slid silently open. He went in without hesitation and the slide closed with a little whir behind him.

A low tunnel confronted him, just barely high enough for him to move without stooping. The walls here were of burnished metal, glowing with impregnated cold-light. It was empty, silent. Evidently it had been undisturbed for years. The Mercutians had not discovered this secret way then.

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The tunnel slanted downward for several hundred yards, then turned sharply upward until a vita-crystal wall barred the way. Hilary could hear vague sounds from the other side. He was in the Robbins Building. He turned to the left, where a shaft stretched upward, completely enclosed by crystal walls. A thin oblong edging showed the platform beneath. He stepped on it, hesitated for a moment. There were two control buttons; one that stopped the lift in the laboratory, the other in the sleeping room that once was Martin Robbins'.

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Hilary decided in favor of the penthouse; there was less chance of a present occupant of the room. If there was-he shrugged his shoulders and loosened the automatic in his blouse. He pressed the button.

The platform shot smoothly upward, up, up, thrusting a thousand feet up. At length it came to a gliding halt. Hilary knew he was on the roof now, in the interior of the wall making one side of the sleep-apartment. The vita-crystal gleamed mockingly opaque at him. If only he could see through; if only he had a Mercutian search beam now. Was there someone in the room on the other side of the wall? He strained his ears to listen, but the crystal was pretty much sound-proof.

Very quietly Hilary drew his gun, broke it, examined the chamber. The six bullets lay snug. He snapped it back in position, held the automatic butt against his side, reached over and pressed the release button.

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The slide whirred open. Hilary waited a second, tense, ready to shoot at the slightest sound. His eyes bored through the oblong. Nothing was in sight except the luxurious furnishings he remembered so well; nothing stirred. But his vision was limited to that part of the room framed by the slide. With infinite caution he peered out, his searching gaze flicking swiftly, around the sleep-apartment. It was a man's room with built in divans, automatic sleep-spray, wall rack to hold illuminated book sheets, magnified so as to be read comfortably from a reclining position on the divan--in short, the usual ordered luxuries of a well-furnished sleep-room.

It was empty--but the divan was tousled, certain small things disarranged. Someone used this room. Hilary stepped out, leaving the slide behind him open in case of an enforced retreat. He paused to think. Where could Joan be held prisoner--if, and it was a big if--she were really here. He ran over the possibilities.

The laboratories were out of the question. The great master room then. No doubt Artok, the Viceroy, had installed himself there. It was regally magnificent. That might repay a visit. A bold scheme flashed across his mind. Seize Artok himself, abduct him into the secret passage, and compel him to disclose Joan's whereabouts, give her up. Hilary smiled grimly. Sheerly suicidal, yes, but he was desperate now, and there seemed no other way.

Gun shifted back into his blouse, with his right hand thrust in, on the butt, he glided softly out of the chamber. No one was in sight. The passageway seemed oddly deserted. Possibly the staff had been attracted to the outer rim of the terrace by the commotion below.

At the end of the passageway, facing him, was the master room. Another swift look about, and Hilary was moving down the long corridor, close to the wall, his footfalls deadened by the soft composition rug.

Slowly, very slowly, he pressed the button to release the slide. It slid open at a barely perceptible rate. As the slender crack widened, Hilary, looked in, taking care to keep his body to one side.

CHAPTER VII
In the Hands of the Mercutians

A Mercutian was lolling in a reclining chair, his gray, warty face turned half away from Hilary. He was rather undersized for a Mercutian, standing not more than seven feet, and his gray, unwieldy body was heavy and gross as though thickened with good living and debauch. A fleshy three-fingered hand was pounding vehemently on the arm of the chair. His guttural roughened voice came clearly to the listener. He was talking to someone unseen from the angle of the slowly widening slit. He was annoyed.

"For the last time I give you the opportunity," the Mercutian howled--in English. "If you refuse I turn you over to Urga; he wants you."

The crack in the door had widened perceptibly. Hilary's heart gave a tremendous leap. Disclosed to his vision was a figure standing opposite the Mercutian, slim, defiant, proud--Joan.

"We must have these Earth slaves," the Mercutian continued, unheeding. "They, must be made an example of. They are responsible for the unrest. They have killed Magnificents; and the Earth fools think they can do the same. They will find out their error soon enough. But as long as those three live, so long will the slaves hope, and plot."

"I cannot tell you anything about them," Joan said monotonously. It was evident that this was not the first time she had said so.

"Yes you can," the Mercutian said as softly as his gutturals would permit. "There is one in particular you know
a great deal about. Urga told me. A long-lost lover, no?" His gray-ridged countenance contorted into a thick disgusting leer.

"There it something mysterious about him. He has no identification tag; he releases Peabody; seems not to know the penalties. He has a pistol, a forbidden weapon; he dares to kill a Magnificent; he eggs on two others, ordinary Earth slaves to join him; he disappears out of sight, in spite of all search." He was shouting now, pounding the chair arm with complete loss of dignity. "Who is he, where does he come from, where did he go? Answer me?"

The girl faced him boldly.

"You are afraid of him, Viceroy," she challenged. "You fear his example. He has shown what a brave man can do; the Earth people will follow him. The Mercutians are not invulnerable."

"Yes," the Viceroy said heavily. He was talking more to himself. Then he realized his mistake. "No, of course not," he growled hurriedly. "Enough of this. You tell me what I want to know or I call Urga in."

Joan's face went white, but she faced him unflinchingly.

"I do not know where he is, and if I did, I would not tell you."

"Very well then." The Viceroy leaned over to the table. The slide was completely open now.

"I wouldn't call anyone if I were you."

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The Viceroy whirled in his chair at the sound of the calm Earth voice, calm yet deadly in its implications. He found himself staring into the stubby opening of an Earth automatic, a forbidden weapon. The hand that held it was steady, and the gray eyes that bored into his were hard as pebbles.

There was a smothered gasp from Joan. "Hilary."

"Yes; come to take you away." He spoke swiftly. "We have no time to waste, Joan. Is there any binding material in the room?"

"I--I believe there is. Dad always kept odds and ends in the store chest near the bookshelves."

"Go and get it then. We'll truss up his most Mercutian Magnificence--No you don't," Hilary said harshly; "keep your hands in front of you and don't move."

The Viceroy was stealthily reaching for the sun-tube dangling from his belt. He jerked his hand back, a cold sweat beading his forehead. Hilary's finger had compressed on the trigger; the slightest extra pressure meant flaming death.

"That's better," Hilary approved.

"You shall pay for this," howled the Mercutian, finding voice again. "You shall suffer a hundred deaths in one."

"Softly," Hilary grinned. "Just a little while ago you were very anxious to meet me. Now that I'm here you don't seem overmuch pleased." Joan was rummaging frantically in the open chest.

The Viceroy started, his unlidded pink eyes opened wider. But he was careful to keep his hands in plain view.

"You are the Earth dog who killed the Magnificents."

"I wouldn't call names," Hilary advised. "It might be unhealthy. But I am that very individual. And I trust"--he bowed mockingly--"to have more notches on my gun before I am through."

"You--you--shall be taken to Mercury. My father has special places for such as you." Joan was coming now swiftly with lengths of wire, soft thick material for swathing.

"Get me there first," Hilary said indifferently. "Gag him, Joan, so he can't open his ugly mouth any more. Then tie him up, well."

Joan thrust the gag into the thick gash of a mouth, choking off a torrent of imprecations in the guttural Mercutian tongue. Then she proceeded to truss him, expertly, efficiently.

"Good job," Hilary approved. "Now with your kind permission, Most Viceregal Magnificence, we shall go." He bowed mockingly. "Come, Joan."

"Not so fast, Earth slave." A cold saturnine voice resounded like the clang of doom behind him. He whirled, shifting his gun swiftly for a quick shot.

A little gush of heat caught his trigger hand as the index finger contracted desperately. The smarting pain tore the pistol out of his hand. It dropped to the floor, unheeded. Hilary found himself staring into the gross unpleasant face of Urga, a sun-tube trained directly at his midriff.

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"The Earth slave who tried to slink into the building," Urga said, surprised. "How did he get up here?"

"I don't know," the Viceroy said shortly, working the gag out of his mouth. "Don't stand there like a fool. Untie me." Gratitude was not among the Viceroy's virtues.

Urga's face mottled as he hastened to obey. When Artok stood finally released, he glared heavily at Hilary and Joan. Then slowly a smile broke over his warty features, a smile that boded unutterable things. Hilary waited
quietly, ready to seize the slightest opening; Joan pressed wide-eyed against his shoulder.

"Know this Earth dog?" the Viceroy jerked at Hilary.

Urga's glance was puzzled. "I told you I threw him out of the entrance, but even then I felt I had seen him before."

"You have, Cor Urga," the ruler laughed shortly. "This is the one who is responsible for the mutterings of the slaves. He slew your comrade, Gornu."

The captain started, peered into his captive's unflinching countenance.

"He's disguised!" he cried. "Let me kill him, Magnificent." He fingered his sun-tube significantly.

The Viceroy was in high good humor now.

"Not so fast. You would let him off too easy. I have a better scheme. We shall show the mutinous dogs how we treat those who revolt against our will."

A cruel smile broke over Urga.

"I understand, Magnificent. Make a public warning of him like that fool Peabody. Rip out his tongue and his eyes, smash his eardrums, and ride him from city to city, in chains."

"Exactly."

Joan shuddered, convulsively. "No, no," she cried aloud in her terror, "don't do that. I'll tell you everything; I'll do--"

"Joan," Hilary interrupted sharply, "not another word." His arm went around her.

She collapsed against his shoulder, sobbing.

"It is too late for bargains now," the Viceroy shrugged indifferently. "We have the man we wanted. As for the other two, you will tell us where they are hiding anyway."

Urga turned to him expectantly.

"Your Magnificence," he urged respectfully, "you promised me the girl, if--"

"Yes, take her." The Viceroy waved a weary hand. "I don't want her; I have too many as it is."

The captain's face lit up with an unhealthy glow. He approached eagerly to seize his prize. Joan gave a little cry of dismay, and shrank closer to her lover.

Hilary tensed in every muscle. Though it meant instant death, he would not permit that towering brute to lay his clumsy paw on Joan.

Urga reached out to clasp the frightened girl. Hilary seemed to uncoil. His fist shot straight up with all the power of his body behind it. It crashed into the jutting jaw of the Mercutian like a charge of high explosive dynol. For all his height and massive strength, the giant toppled over, thudding heavily against the floor.

For the moment Hilary saw freedom ahead. The sun-tube had fallen from the nerveless fingers. He darted for it with the speed of a striking snake. Even as his fingers curled around the handle, there came a roar from the Viceroy.

"Drop it, or I'll cut you in two."

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Hilary knew when he was beaten. Slowly, reluctantly, his fingers uncurled. He arose, to meet the gleaming opening of the Viceroy's weapon, and the surprised stare in back of it.

Urga got up groggily, feeling gingerly the tender point of his jaw. There was unfathomable hatred in his lidless eyes.

The Viceroy chuckled throatily.

"I never thought, Cor Urga, to have seen a puny Earthman, a mere midget, overcome a Mercutian. Especially you, a winner of the prize of strength three times running in the arenas."

Urga flushed darkly.

"It was an unexpected blow; it caught me unawares," he said heatedly. "I'll break the slave in two."

"Try it--without your sun-tube," said Hilary laconically.

The captain made a movement toward him.

"Leave him alone," Artok cried sharply. He seemed to enjoy his Captain's discomfiture. "I have other plans for him. Now go. Take the girl with you. I'll watch this presumptuous Earthling."

Urga advanced with an evil grin. Hilary thrust Joan suddenly behind him; crouching like a cat. He would go down fighting. For all his bulk, the Viceroy wheeled on his flank, raised his weapon.

"One false move, and you are dead carrion," he said coldly. His weapon was raised. Hilary was caught between two fires, exposed to the searing blasts that would issue at the slightest pressure.

Nevertheless he intended to strike. A sudden swerving jump, and he might throttle one before he would be blasted into nothingness. It would be Urga, he decided grimly. He tensed for the final desperate, suicidal spring. The two Mercutians were watching him like unsheathed hawks.

"Good-by, Joan," he whispered, and his muscles went taut.
Urga paused, his weapon came up sharply. One little pressure, and--

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There was a commotion in the outer hall, the sound of padding feet. The four in the master room froze into immobility. Two Mercutian guards stumbled panting into the room. They came to a jerking halt, threw themselves prone upon the floor, arms outstretched in obeisance.

"May we speak, oh Magnificent?" they asked humbly.

"Say your say," the Viceroy said crossly.

They rose to their feet heavily, and one of them spoke.

"The Earth dogs are revolting. The Cors of the outlying districts report that the slaves are massing and are marching on Great New York. They are armed with Earth weapons. The Cor of the Third District reports two men responsible--one is a giant among them, almost as tall as our own kind; and the other a puny red-haired firebrand. The Cor has tried to capture them, but they are elusive. Even the search beams cannot disclose their hiding place."

Hilary's heart gave a great bound. Grim and Wat had not waited then.

The Viceroy's face darkened with anger.

"The filthy scum," he growled; "this morning's lesson was not enough. This time I'll slay, burn, smash until there isn't a single rebel left. I'll fertilize their damned Earth with their own black blood. You, Cor Urga," he snapped, "transmit my orders to theCors of the Hundreds. They are to mobilize their men at once, and proceed in accordance with instructions known to them as General Order One. All conveyors to be stopped except for troop movements. Every slave found with weapons, or acting suspiciously, to be slain on the spot. Flying patrols to scatter in pairs, observe for concentrations of slaves. Ray any gathering without warning. Inform Cor Algor of the Tora (this was the great armed diskoid of the Mercutians that had previously reduced Great New York, Hilary found out afterwards) to resume his station over the city, ready to act when I give the signal."

Even in the conflict of emotions, Hilary marveled at the unhesitating, snapped flow of orders. The Viceroy, in spite of his seeming gross lethargy, was a soldier, and an efficient one to boot.

"Yes, Magnificence." Urga bowed low, and departed, thrusting a malignant glance at Hilary.

The Viceroy thrust off from him his bright yellow robes, wriggled his vast bulk swiftly into a close-fitting dull-gray tunic. To his belt he fastened little round knobs; the sun-tube dangled swankily at one side. He was accoutered for battle.

He seemed to have forgotten the existence of the Earthlings.

"You," he snapped to one of the waiting guards, "go to the laboratory at once; convey my strict orders to Cor Eela that the weather machine must function perfectly. There must be no slip-up--his life will answer for it."

"Yes, oh Magnificence." The guard prostrated himself once more, then departed hastily.

Vast echoes resounded in Hilary's mind. "Weather machine--weather machine," he puzzled, holding Joan the tighter. There was more to this than met the eye. He must think.

The Viceroy turned suddenly, stared at them, fingering his tube.

"I could of course have you killed at once," he thought aloud, "and have no further trouble; but then Urga would be angry." His lidless eyes rested fleetingly on Joan. "And I would lose my public warning to the few Earth dogs who will survive. If it weren't that I needed them to till the fields, and work the machines, I would not leave a single one alive."

He seemed to come to a decision. "You'll wait my return." He spoke sharply to the guard. "Bind them up well. Thrust gags into their mouths." He grimaced. "I can taste mine yet. And remember, if they escape, just turn that sun-tube of yours on yourself. It will be pleasanter for you. Understand?"

"Yes, Magnificent."

The obsequious guard caught hold of Hilary, under the watchful tube of Artok, and proceeded with clumsy weighted fingers to tie him up. Hilary did not resist. An idea was slowly forming in his mind. Joan's turn came next.

When they were trussed so tightly that neither could move, the Viceroy smiled mockingly. "We shall meet again, Earth dogs," he said, and was gone.

CHAPTER VIII

Rescued

The guard looked at his captives sourly, kicked viciously at Hilary to relieve his feelings. There was fighting to be had outside; Earth slaves to be tortured and slain, and he was out of it--wet nurse to a couple of prisoners.

He growled disconsolately. Through an open slide window giving out on the terrace, a confused roaring, a babel of sounds came filtering through. There was trouble below--fighting already, very likely. The Mercutian
glanced back at his bound and gagged prisoners. They were immobile, helpless. He looked guiltily about. The great room was bare, silent. With almost furtive movements he opened the door leading to the terrace, stumbled out, and was leaning over the parapet, absorbed in the spectacle of Great New York below.

Instantly, Hilary lifted his head, exerting to the utmost his muscles. He could just see the guard's back, strained over the side. Hilary relaxed rolled painfully over to Joan. She stared at him wide-eyed.

If only he could make her understand. He must get the gag out of his mouth. Every moment was precious; the guard might return momentarily. He screwed his face into tremendous contortions, wiggled his feet as much as he could, worked his jaws, trying desperately to convey his meaning.

Joan watched him puzzled; trying to follow those strange contortions. Beads of perspiration started on his brow as her face registered blank incomprehension. Just as he was giving up in despair, she grasped the idea. Her face brightened, and her shapely head nodded stiffly.

The trussed-up pair started at once to pivot around on the floor. Fortunately the composition was polished, affording little friction. With infinite pains the maneuver was completed. They lay side by side now. Joan's trim feet close to Hilary's head.

Writhing and contorting, she worked the sharp heel of her foot against the thick wad of the gag in Hilary's mouth, and pushed. It was solidly tied, but it gave a little. Encouraged, she redoubled her efforts, pushing with all the limited force of her bound limbs.

The yielding gag cut cruelly, the sharp heel scraped and gouged into Hilary's cheeks, but he did not mind. He was in a fever of apprehension. If only the guard's interest were held by the events below until he had accomplished what he intended!

At last his mouth was free. The gag had been pushed over his nose. Joan rolled away. She had accomplished the task Hilary had set her, but she was still puzzled. What earthly good would it do him to talk?

She found out almost immediately. He was twisting his head, burrowing with his nose against the blouse over his right shoulder. The open tunic gave a bit, and he burrowed painfully, Joan watching with growing fascination, until one of the binding wires stopped further progress. But it seemed far enough, judging from the satisfied illumination in Hilary's eyes.

He spoke, his mouth pressed close against the shoulder blade, his tones queerly muffled, thick.

"Grim Morgan, Wat Tyler, Grim Morgan, Wat Tyler," he whispered over and over again. He could not hear if there was any response; his ears were muffled now by the spread gag. He could not help that.


Over and over he murmured the message, hoping desperately they would hear him in the communication disks strapped to their shoulders.

"Come quickly," he repeated; and then the guard, tiring of the view below, or the streets having been cleared of rebels, came softly into the room. Hilary's head jerked quickly back, the shoulder of his tunic falling back into position.

"Here, what's this?" the guard growled suspiciously, catching sight of the displaced gag. "How on Mercury did you do that?"

He knelt swiftly, thrust the gag back into position with ungentle paw, kicked the unresisting form in the side to show his displeasure, and rose. Hilary's heart pounded; the guard had not seen the inconspicuous disk under the tunic. He was in an agony of expectation. Had his comrades caught his message? Could they rescue him even if they had? Questions that only time could answer.

The guard was alert now; he did not like that queer removal of the gag. There would be no further chance to unbind themselves. What seemed hours passed as they lay cramped, immobile.

The air grew thick and warm, or was it only his imagination? No, for the guard felt it, too. Then something buzzed, intermittently. One long, two short. It seemed to emanate from a round black button on the sleeve of his gray tunic. A signal!

The guard exclaimed something in guttural Mercutian, rose hastily, and closed the open door and window. He pressed another button, and sheeted lead curtains rolled swiftly over the vita-crystal roof, darkening the room, cutting off the rays of diffused sunlight. Then he seated himself not far from the captives, facing them, grinning savagely. Hilary wondered why.

Again what seemed hours passed. Behind the lead curtain, the room had become definitely, uncomfortably warm. The Earthlings perspired; the atmosphere was literally steaming; and in their cramped limbs, the torture was
fast becoming unbearable. Only the Mercutian guard did not seem to mind. He was accustomed to far higher temperatures on the arid planet that was his home.

Just as the prisoners were gasping almost their last gasp, the heat seemed to recede, swiftly. At once the guard rolled back the leaden shade opened the door and window again. His grin was broadly triumphant. Something clutched at Hilary's heart; he understood now. The beastly invaders! He struggled furiously at his bonds, but they did not give. He ceased his efforts, panting.

The moments passed. Hilary was giving up whatever slender hopes he had had. Wat and Grim had not heard, or if they did, they could do nothing. A slow, sullen despair enveloped him.

He was watching the guard. That gray-faced giant turned his head suddenly, jumped up as fast as his lumbering alien weight could move, snatched at his sun-tube.

"Don't move an inch, if you want to live," a deep, slow voice vibrated through the room. A well-remembered voice. Hilary would have laughed aloud his relief, but he was gagged. His comrades had not failed them.

* * * * *

The guard dropped his half-raised weapon sullenly, staring at the intruders in dazed incomprehension. Hilary jerked his head around. Framed in the doorway was Grim--good old Grim--a long-barreled dynol pistol steady in his hand. From behind him there darted a little figure, red-haired, freckled, shrill with delight. An old-fashioned submachine gun, abstracted from some museum, weighed heavily under his arm.

It clattered unheeded to the floor as the bantam dived for Hilary and Joan.

"We came as fast as we could when we got your message," he crowed. "Dropped everything." His nimble fingers were making havoc of the knotted bonds, while his nimbler tongue wagged on. "Boy, we have them on the run. We'll sweep them out into space by the time we're through."

Hilary and Joan were free now. Very painfully they rose to their feet, stamping and pounding their arms to make the sluggish blood circulate again. Wat hopped about in his excitement.

"Here, you little runt," Grim's voice boomed at him, "stop jumping around, and tie up this Mercutian. We have no time to waste."

Wat groaned comically. "See how that big ox orders me around," he proclaimed, but he picked up the wire and in a trice had the guard helpless and glaring.

Hilary had recovered his speech.

"Thanks, boys," he told them simply. "I knew you'd come if it was humanly possible. But how did you manage to get through the Mercutians? The building is honeycombed with them."

* * * * *

Morgan grinned. "We came in the Vagabond," he said.

"What," almost yelled Hilary, "you mean--"

"That your ship is resting comfortably outside on the terrace. When little Wat here caught your message in the communication disk, we were busy organizing companies of Earthmen in the hills back of Suffern. As recruits poured in, we'd tell them off in hundreds, appoint officers, see that they had arms, or gave them directions where to find the old caches, and hustled them off. Had to shift our quarters continually, because Mercutian fliers would pick us up with their search-beams, and start raying. Had some close shaves. But when we heard you were caught, we turned over the command to the nearest new officer, hurried to the gorge, and here we are. The Vagabond handled beautifully."

"I could take her myself to the Moon," Wat boasted.

"Hadn't we better be going?" Joan asked anxiously.

"There is work first to be done," Hilary, answered grimly. "There's a certain weather machine in the laboratory I want to take a look at."

"Weather machine?" Grim echoed, puzzled.

"Yes. The Viceroy let something slip about it. For some reason it's very important to them that it continues to function. I'm curious."

A gasp from Joan. Surprised, the men turned to her.

"Of course," she said breathlessly. "Father had been working on it for the longest time. It was a machine to control weather. Something to do with broadcasting tremendously high voltages, ionizing the air and causing rain clouds to form or reversing the process and scattering clouds back into thin air. This was the Master Machine. All over the Earth, at spaced distances, were smaller replicas, substations, controlled from this one. He had great hopes of furnishing equable weather to all the Earth. It was just completed, when...." She trailed off.

* * * * *

Grim frowned. "Very interesting, but what is so terribly important about it now?"

"You fool," Hilary exploded, "it's as important as hell. Don't you see? What are the Mercutians' weapons? Sun-
tubes, sun-rays from their fliers, tremendous burning disks that are their space-ships. Sun--sun--everything they have
deponds upon the sun. Take away the sun, and what have they? Nothing but their hideous giant bodies--they are
weaponless. Now do you see?" He fairly shouted at him.

Grim's face lit up heavily; Wat was dancing insanely.

"Get hold of the machine, reverse the process. Make it form clouds, great big woolly ones. Start a rain that'll
make the Deluge look sick; forty days--a year--and we'll drown them all," Wat cried.

"Exactly," Hilary nodded. "Joan darling, you and Wat get into the Vagabond, and wait for us. Grim and I will
take care of the laboratory."

"What?" Tyler ejaculated. "Leave me cooped up when there's a fight on. I'm coming."

"So am I," Joan was pale but determined.

"Oh, Lord," Hilary groaned. "Listen to me, please," he said patiently. "Time is precious, and I can't argue. Joan,
you would only be a hindrance. I for one would be thinking more of protecting you than fighting. As for you, Wat,"
he turned to the furious bantam, "I'm sorry, but you'll have to take orders. The Vagabond must be guarded. If we're
cut off, we're through. And there's Joan."

"Well. If you want to put it that way," Wat grumbled.

"I knew you'd be sensible," Hilary said hurriedly, not giving them a chance to change their minds. "At the
slightest alarm, take off. Don't try to rescue us if we don't return. The Earth cause is more important than any
individual. If you get caught, too, the revolt will be leaderless; at an end."

The men shook hands gravely. Joan, white-faced, kissed Hilary passionately. "Be careful, my dear."

* * * * *

Then the two men were gone, moving cautiously down the corridor with deadened footfalls. Hilary had
retrieved his automatic; Grim had his more modern dynol pistol. The guard had been thrust into a corner, bound,
unnoticed.

The laboratory was on the floor below. They trod carefully down the inclined ramp connecting all the floors.
The corridors, the ramp, were deserted.

"All out fighting," Hilary whispered. "The revolt must be spreading."

Grim swore. "The idiots. I told them not to start anything until I returned. They'll be wiped out--they weren't
ready."

Hilary nodded slowly. He thought of the strange heat while he had been captive. There would be very few
Earthmen left alive in Great New York now.

They were at the foot of the ramp now. Just ahead gleamed an open slide. A pale-blue light streamed out at
them; in the oblong of the interior they could see moving shapes, weirdly cut off, crossing their field of vision;
bright gleaming machines, segments of tremendous tubes flooded with the pale-blue light. And over all was a
constant hum, a crackling, a whining of spinning parts. The laboratory!

CHAPTER IX
The Weather Machine

The two men flattened themselves against the wall so that they could not be seen by a casual glance from the
Mercutians inside the laboratory.

"There are a lot of them," Grim whispered.

"Can't help it," Hilary answered grimly. "Have to take our chances."

"Of course," Grim said simply. There was no backing out.

Silently, with catlike tread, they inched their way forward flat against the wall, keeping out of the blue flood of
illumination. The shapes, or rather segments of shapes within, moved about, engrossed in the business at hand,
unaware of the creeping death.

The Earthmens had reached their stations unobserved, one on either side of the open slide. Very carefully Hilary
protruded his head around the vita-crystal, and ducked back almost instantly. But his quick eye had taken in all the
essential details in that momentary vision.

There were about a dozen Mercutians in the long laboratory, and each had a sun-tube dangling from his belt,
ready at hand. The laboratory was crowded with apparatus, but what had drawn Hilary's attention was a gigantic
gleaming metallic sphere set up prominently in the center of the room. Protruding from it at all angles were great
quartz tubes, through which a blue light pulsed and flamed. It was connected by huge cables to a spark-bathed
dynamo. Other cables writhed through the translucent ceiling. The weather machine!

Hilary took a firmer grip on his automatic, nodded once to Grim. The two Earthmen stepped simultaneously
through the open door.
"Raise your paws high and keep them up." Hilary's voice cracked like a whip through the busy confusion of the laboratory. The Mercutians, scattered as they were, whirled around from their tasks to face two deadly weapons held by two determined-looking men.

There was a chorus of strange guttural oaths, but every hand moved skyward, reluctantly.

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Hilary picked out the most blasphemous sounding of the cursers, rightly deeming him the Cor in charge.

"You," he said, "what switches regulate the weather machine?"

The Mercutian Cor was a particularly ugly specimen. The gray warts were gigantic, hiding whatever semblance of manlike features there might have been beneath.

"I'll see you dogs burned to a cinder in the sun first," he growled.

"Keep them covered, Grim," Hilary said sharply. "I'll take care of this fellow personally."

He walked straight across the room for the Cor, eyes blazing, index finger on trigger. The Cor, fear staring out of his lidless eyes, backed slowly away from the approaching death. There was a hushed silence.

"I'll tell, I'll tell!" the Cor screamed, as the relentless weapon almost touched his paunchy stomach.

"I thought you would," Hilary said grimly, not for an instant relaxing the pressure against the trigger. "If you value your worthless hide, you'd better talk, and talk fast. What switch reverses the machine, to bring on rain? If you are wise, you won't try to fool me."

The wretch almost stumbled in his eagerness. "By the gray soil of Mercury I'll tell you the truth." His arm flung up, pointing. "That knob over there controls the--"

Hilary never heard the rest. There was a crash at the other end of the laboratory. One of the Mercutians, tired of keeping his arms high extended, had attempted to rest his huge bulk against a laboratory table. It went over with a splintering crash of glassware.

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Hilary whirled around to face the noise. As he did so, the Cor seized his opportunity. His right arm dropped to his side, jerked up his sun-tube. Hilary heard Grim's warning cry, tried to pivot back again. But Grim beat him to it. The dynol pistol exploded sharply; the flaming pellet caught the Cor square in his side. There was a dull explosion and the Cor was torn violently into bits. He dropped, a mass of shapeless blobs.

But now hell had broken loose. The Mercutians were not cowards. At the moment of the diversion, every one of them had gone for his sun-tube. A flame streaked close to Hilary's head, shivered the opposite wall into molten fragments. He ducked behind a table and fired. A Mercutian threw up his hands, staggered and pitched forward heavily. Grim's dynol bullets whined in their passage, spattered the laboratory with flying blobs of flesh. They did terrible execution. Hilary's automatic spat its leaden hail.

But the Mercutians were entrenched now behind tables, machinery, whatever cover they could find. The beams from half a dozen sun-tubes slithered across the room, burning flaming paths through the overheated air, bringing the very walls down about them. It could not last long. Already Hilary had a nasty burn across one shoulder; there was a streak of red across Grim's forehead as he hid behind the panel of the entrance, whipping his pistol around to fire, and ducking back again. There were too many of the enemy, and overwhelming reinforcements could be expected any moment. The Earthmen's position was desperate.

Through it all the great weather machine hummed and crackled; the tubes were sheets of surging flame. Hilary cursed softly. If only the Cor had completed his sentence before he died. Hilary would have chanced a sudden rush forward to reverse it, to bring on a deluge of rain and clouds, even though it meant certain death. The machine seemed to gleam at him mockingly; the hum continued with tantalizing smoothness.

"Look out," Grim's voice came to him sharply. He jerked his head back, just in time. A ray streaked past his ear like a thunderbolt. The heat from it scorched his face.

* * * * *

The Mercutians were stealthily crawling nearer, pushing heavy, tables in front of them as shields. He was almost outflanked now. In another minute he would be exposed.

Hilary thought rapidly. His position was untenable. He would have to run for it. A sudden dash to the door might possibly win through. But the machine! He set his teeth hard. If he could not change the weather, at least he could destroy the infernal thing, stop its grinding out perfect sunshine for the Mercutians.

He lifted his weapon. Off to one side a Mercutian arm advanced cautiously, bringing up a sun-tube. He swung on it and fired. The sun-tube clattered to the floor and the arm jerked back, accompanied by a howl of anguish. Hilary smiled grimly, took careful aim at the metal sphere of the machine. The bullet leaped true for its mark. A little round hole showed--but nothing happened. The infernal machine hummed softly as ever.

He cursed, fired again. Another round hole, and that was all. With increasing viciousness he turned his aim on the quartz tubes, pierced them through and through. Before his very eyes, the quartz seemed to run and melt around
the holes, to seal them tight as if he had never shot. The blue flames leaped and surged mockingly. The Mercutians were jeering now; raucous calls went up.

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Hilary felt a sinking despair. He had failed; would have to run for it now. Small chance to make it, too. Then he heard Grim's deep bass. "Hold it a moment," he said as if he had read his thoughts.

Fascinated, Hilary saw the giant's pistol slowly thrust its long barrel around the edge of the crystal slide. A half dozen rays leaped viciously, for it. But a flaming pellet streaked out of its orifice before it was jerked back.

Hilary could see its red path as it struck the sphere of the machine. The next instant there was a dull explosion and the whole machine disintegrated into a smother of flying fragments. The expanding dynol had done the trick where lead had failed. There would be no more weather control.

But Hilary did not pause to see the finish. Even as the machine burst, he was running across the room, bending low. Fragments whizzed by him at a fearful clip; rays crisscrossed all about him.

But somehow he was through. Grim's finger was on the slide button. It closed with a snap behind him, cutting off the pursuing howls of rage.

Silently the two men darted up the ramp to the pent-apartment, dashed into the master bedroom. The Mercutian guard whom they had left securely bound, was gone. The Earthmen looked at each other, a great fear in their eyes. In one bound Hilary was at the door slide, thrusting it open. He tore out upon the open terrace, Grim right behind him.

* * * * *

They looked wildly about. The terrace was empty. There was no sign of the Vagabond, or of Joan and Wat. High overhead hovered a great burnished diskoid. Long streamlined Mercutian fliers darted through the air, but nowhere was there a sign of the familiar sphere.

Hilary gripped his companion's arm. "They've been captured, Grim," he choked.

"Nonsense," the giant said gruffly, to hide his own misgivings. "They just took alarm at something and winged off."

"But where is the guard then?"

Grim shook his head. He could not answer that. Despair overwhelmed Hilary. After all he had gone through, to have Joan snatched away from him at the moment of success. It was terrible. Wat too, that freckled-faced bantam.

"I should never have left them alone," he accused himself remorsefully.

"Here," said Grim sharply, "none of that. You did exactly the proper thing. We'll find them yet."

It was a confidence that he did not feel. There was the noise of padding feet up the ramp. The Mercutians were coming, in force.

Grim gripped Hilary by the shoulder, shook him vigorously. "They're coming. We're trapped."

Grendon snapped out of the lethargy into which he had sunk, face drawn and gray.

"No. There is a way. Follow me."

The first of the Mercutians pounded heavily into the room when Hilary had thrust Grim into the secret lift. He whirled and fired. The Mercutian coughed and fell forward. Other gray warty faces, furious, thrust from behind their dying comrade. But Hilary was in the lift, pressing the button for full speed down. A darting ray showered them with rounded smoking bits of vita-crystal, but they were dropping headlong through the building.

* * * * *

Ten minutes later they emerged cautiously from the entrance to the Pullman Building. It was deserted, deathly still. The two Earthmen stopped short, horror-struck at what they saw.

The streets were shambles. Hundreds of bodies lay sprawled in tumbling twisted heaps. Earthmen all, with here and there the grotesque huge bulk of a Mercutian who had failed to hear the warning signal. The bodies were scorched, blackened. Raw agony appeared on contorted desperate faces. It was not good to look upon.

"Wh--what has happened?" Grim gasped, his breath coming heavily.

"Just a little pleasantry of the Mercutians," Hilary said bitterly. He looked upward. High overhead hovered a gigantic shape, motionless.

Its great disk, burnished and dazzling in the cloudless sky, seemed to cast a sinister shadow over the city it had destroyed a second time.

"There's the toy that did it," said Hilary. "I felt the heat while I was a captive up in the Robbins Building. You must have flown over after, and missed it."

Grim shook a great brawny fist aloft. His deceptively mild eyes were hard flames now. His face was set in great strong ridges. Hilary had never seen him this way before.

"I'll rip every Mercutian to pieces with my bare hands--shred him into little bits." He meant it too. Hilary shuddered.
Far off down the wide thoroughfare came the glint of weapons, the sight of massed ranks. A Mercutian patrol was shambling along, heavy-gaited.

"Come on, Grim, let's get out of here," said Hilary.

They flattened like shadows against the wall, slunk stealthily through radiating streets. As much as possible they kept their eyes away from the sickening sights, the poor burned bodies of their fellow men. Steadily they headed for the branch local conveyors as being less likely to be under surveillance.

The Ramapos was their destination. Hilary went dully, listlessly. Joan was gone again; this time he could not possibly know where. Every step he took through the sickening sights, the poor burned bodies of their fellow men. Steadily they headed for the branch local conveyors as being less likely to be under surveillance.

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CHAPTER X
Back to the Ramapos

It was dark when they reached the first swellings of the Ramapo Range. It was dangerous to try and make their way through tangled brush and mountain trails. All night they camped on the bare ground, sleeping fitfully, cramped cold, shivering. They dared not light a fire; it would draw instant unwelcome attention.

When dawn came, they were on the move, glad to stretch their sodden limbs. Unerringly Grim homed for the invisible cleft. Nothing stirred in the forests, even the birds seemed gone. The fog had lifted, the sun blazed forth in unclouded majesty. The damp on them dried quickly.

But Grim shook his fist at the unwitting orb.

"Damn that weather machine," he growled. "Breaking it seems to have made matters worse. Even the regular midnight shower has stopped. I'd give ten years of my life for the sight of a cloud."

"It will never rain again," Hilary said wearily. "It has forgotten how."

The bright sunny sky seemed a brazen hell to the footsore Earthmen. It mocked and jeered at them with sparkling waves of warmth.

Before them was an unbroken mass of underbrush. The next instant they were on the brink of the chasm.

"They haven't found us yet," said Morgan, surveying the looped end of the rope ladder. They climbed swiftly down the swaying rungs. The rock slanted with them, turned sharply and fell sheer. Below there was a confused murmur, the sound of movement.

A voice came floating up to them, sharp, commanding.

"Stop where you are, you two. You're covered."

"It's Morgan," Grim bellowed, not pausing an instant in his descent.

The next instant he dropped lightly to the floor of the gorge. A moment later Hilary stepped beside him.

Men were crowding about Grim, clean-cut, determined-looking Earthmen. Nothing like the men he had encountered on his first trip on the express conveyor. The bottom of the gorge had all the appearance of a wartime camp.

There were at least a hundred men encamped in the narrow cleft, crowded and crowding. A tall man thrust himself forward, spare, angular.

"Welcome, Captain Morgan," he cried. "We had given up all hopes of seeing you again."

"Hello, Waters," said Grim. "Where's Lieutenant Pemberton?"

The other looked shamefaced.

"He's gone," he muttered. "Took two hundred men with him."

Morgan's face was awful. "Disobeyed orders, did he? Where did he go?"

"To join in the attack on Great New York. Reports came in that the countryside was up in arms, moving to attack the Mercutians. I couldn't hold him. Said you were crazy, never coming back. He went, and two hundred of the boys went with him."

Grim said: "Know what happened?"

Waters shook his head. "Our radio communication went dead yesterday afternoon."

"He's dead," said Grim softly. "The others too."

A groan went up as he described swiftly the holocaust of the day before. "That was why I warned you all to wait. We can't fight them yet. But I'm forgetting...." He turned to Hilary, who had remained quietly aside. "This is
Hilary Grendon, your Chief. He's the man who is responsible for the revolt. I told you about him. We all take orders from him hereafter. If anyone can beat the Mercutians, here's your man."

A babel of sound burst about him like a bomb. Men patted him on the back, shook his hand, crowded him until he was almost smothered. It was a rousing reception. The kind Hilary had dreamed of on his return from his tremendous flight through space—and had not received.

For his act of revolt, unwitting as it was, had fired the imaginations of the Earth people, who in their degradation and despair had come to believe the Mercutian overlords invulnerable. It had been the little spark that touched off a far-reaching train of events. In the few days that had elapsed Hilary had become a legendary figure.

The sparkle came back to his eyes, his brain cleared of the fog of hopelessness as he took command. Joan was lost—yes—but there was the Earth to be saved.

* * * * *

His orders crackled. The little gorge became a hive of activity. With Grim and Waters as efficient assistants he soon whipped the tiny company into ordered discipline. Absurdly few to fight the Mercutians, but Hilary counseled patience. They were a nucleus merely, he told them. When the time arrived to fight in the open, the peoples of the Earth would swell their ranks.

To provide against the day, he sent scouts out to filter through the surrounding villages and towns; unarmed, to all seeming meekest of the Earthlings. They stirred the embers of revolt with muted whisperings; they found trustworthy leaders in each community to organize secretly all able-bodied men; they returned with tidings of the outside world, with food and other necessities.

Sometimes they did not return. Then others went out to take their places. It was the fortune of war. Day and night a sentinel was posted in a dugout directly under the overhanging lip of the gorge. It was his duty to warn of impending attack; above all, to rake the sky ceaselessly with a crudely-contrived periscope for signs of gathering clouds, be they no bigger than a handsbreadth.

But the heavens were a brass blaze by day and a glittering mask of stars by night. Weather machine or none, in truth it seemed that it had forgotten to rain.

* * * * *

Hilary was hard put to it to restrain the impatience of his men. Reports drifted in from the scouts. The premature revolt had been crushed in blood and agony. New York was deserted except for the Mercutians. The country round had been ruthlessly rayed; not only had the armed bands of Earthmen been ferreted out and destroyed, but peaceful communities had been wantonly burned into the ground.

Strong reinforcements had been rushed to the Great New York territory from more peaceful sectors of the world. There were three of the terrible diskoids hovering within a radius of one hundred miles, ready to loose their hideous destruction at the slightest sign of disaffection.

But this time the spirit of the Earthmen was not broken. Their gait was springier, their glance more forthright than heretofore. For every one knew that Hilary Grendon, the prime mover, the defier of the Mercutians, had escaped. The invaders sought him ceaselessly, offering huge rewards for knowledge of his whereabouts. But there were no traitors. Even these few who knew would suffer unimaginable tortures rather than reveal him to the enemy.

"Patience," Hilary counseled his little band. "I know it is hard; I have my own scores to even. But we could only bring disaster upon ourselves and the cause of Earth's freedom by premature action. What have we? A handful of men, poorly armed. A few pistols; only, three of which can use the dynol pellets; a little ammunition. The rest of you have knives, axes, pitchforks. Poor enough weapons against the terrible rays of the Mercutians. We must wait."

Someone grumbled. "For what? Until the Mercutians finally trace our hideout and ray us out of existence?"

"We must take that chance," Hilary told him quietly. "Let it but rain, and we move at once."

"It never will," someone averred with profound conviction.

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It began to seem so as the days passed, and the sun blazed pitilessly as ever. The brief night showers had ceased completely. That seemed the only effect of the weather machine's destruction. Some of the weaker spirits among the men were for disbanding. They were afraid of eventual discovery; anxious about their families, left to the tender mercies of the outlanders. Hilary argued, dissuaded, but to no effect. They were determined to go. If by the end of the week there was no action, they said, they would leave. It was Wednesday then.

Thursday and Friday passed. No change. On Saturday a scout brought breathless tidings. One of the great diskoids had crashed to the ground from its station fifty miles up in a smother of flame and flying fragments. No one knew what had happened; the Mercutians of course threw a strict censorship about the affair.

But rumors flew on winged whisperings. Some war vessel from space had attacked the Mercutian, brought it down. More diskoids were rushed to New York; there were five now menacing the territory.

Grim looked steadily at Hilary when the news was brought to them. A momentary wild hope flared in his
friend's eye that died out quickly.

"I know what you're going to say," said Hilary. "You think it is Wat Tyler and Joan, somehow escaped in the Vagabond."

The giant nodded slowly. "Why not?" he challenged.

"It's impossible," muttered the other. "Where could they have been all this time? Surely they would have returned to this place. And you forget that Mercutian guard who was freed. No, my friend, they have been killed, the Vagabond seized, and that was the end to that."

Morgan shook his head skeptically.

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Saturday was cloudless. Sunday morning the malcontents were to leave, to dribble back quietly to their homes. They were sullen, defiant in the face of the openly expressed scorn of the loyal men, but determined.

"No use getting ourselves killed for nothing," they muttered.

Double sentries were posted that night. A gloom hung over the camp. Hilary went to sleep heavy-hearted. This seemed the end of all his visions. Joan dead, Wat too; no hope of freeing the Earth from its slavery. If only he had the Vagabond, he'd take off again for the uncharted reaches of spaces, find some little habitable asteroid, live out the rest of his meaningless life there. With these gloomy thoughts he fell at last into fitful slumber.

He was awakened, hours later by a sudden uproar. The camp was in confusion. Sleepy voices tossed back and forth in inextricable babble. Hilary was on his feet in an instant, instinctively slipping his automatic into his blouse. Grim looked huge at his side, unperturbed.

"What's happened?" Hilary shouted to make himself heard.

"Don't know," grunted the other, "but we'll soon find out."

He pushed massively through the milling crowd of sleep-frightened men like a ship shouldering the waves, Hilary in his wake. One of the sentinels appeared suddenly before them.

"You," spat Hilary, "why aren't you at your post?"

The man saluted automatically and gasped.

"The Mercutians have come."

"What do you mean?" Hilary demanded, as a groan went up.

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"One of the weak-kneed men, sir," the sentry ejaculated, "wouldn't wait until morning to make his get-away. We found him climbing out. Said it would be dangerous in broad daylight. He was in a terrible funk. We had no orders to stop anyone who wanted to leave, so we just jeered him, and let him go. My comrade leaned out to watch."

"As he hit the ground, he was bathed suddenly in light. The next instant the blackness of the night was split by a sizzling flame. It crisped the poor fellow to a cinder, and sheared the head of my comrade clean off. I caught the body, pulled it back into the dugout, but it was too late."

"I knew what had happened, sir. Some damned Mercutian flying patrol had spotted us with their search beam. I didn't wait for more, but scrambled out of the dugout as fast as I could. Up above I saw a one-man flier slanting down for me. It was a-sparkle, ready for another ray. I came down the ladder in a hurry, I tell you."

The man was panting, white-faced. Someone cried: "It's all over; they'll smother us in now."

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Hilary swung around. It would take very little to start a panic.

"Stop that," he said sharply. "Now is no time to play the coward." He turned again to the sentinel.

"A one-man flier, you said?" he reflected aloud.

"Yes, sir," the other answered, "and I'll bet he's calling for help right now."

"That's just what I intend putting a stop to," said Hilary grimly. He shifted his gun to an easier drawing position, swung himself aloft on the ladder. "Take over, Grim, until I come back," he shouted down. "If I don't, send others up to get that Mercutian."

"Come down," Grim yelled after him, alarmed. "I'll go up; you're the leader here."

"That's why it's my job. So long."

The men stared up after the tiny ascending figure, lumps in their throats. They would die gladly for Hilary Grendon now; he was proving himself. Grim fumed and waited. Hilary had disappeared above the angled bend.

CHAPTER XI

Driven from Cover

Far overhead, Hilary climbed swiftly. He realised the seriousness of their situation. Let that Mercutian flash his message to Headquarters and there would be a swarm of fliers upon them within an hour's time. They would be caught like rats in a trap, without a chance for their lives.
He gritted his teeth and swung himself up the faster. He turned the bend. There was the dark sky above, faintly spangled with stars. The flier was not in sight. Hilary stifled an imprecation. If he had taken off, they were doomed.

He moved more cautiously now, stepping gingerly from rung to rung up the swaying ladder. The cleft widened; he was near the top. He paused. There was not the slightest sound. But Hilary was taking no chances.

With infinite slowness he raised his head over the matted underbrush that masked the entrance. For the moment he could see nothing in the pitchy blackness. Then a dim shape loomed to one side. From within it there came a tiny hum, intermittent, almost inaudible.

Hilary knew what that was: a transmitter. Even then the fatal message was winging through the ether. He did not hesitate. He lofted to the ground with one quick heave, steadied on his swaying feet as the automatic flashed into his hand.

"Throw up your hands, Mercutian," he shouted at the dimly-perceived bulk. "I have you covered." He tensed, straining his ears for any movement that might locate the hidden foe.

The tiny humming ceased abruptly. There was painful silence.

"Don't try--" Hilary commenced. He stopped, swerved his body suddenly to one side. A red glow had warned him. The hurtling ray scorched past him with a crackling blaze. Hilary was off balance, teetered, and went down with a crash into the thorny underbrush, his automatic exploding into sharp flame.

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A hoarse guttural laugh came from the flier. "Got you that time, Earth dog," the invisible Mercutian taunted. There was silence. Another belt crashed from the ship, heaved the ground under its impact. Another and another. Still no break in the silence, no cry.

The Mercutian muttered to himself: "The dog is dead, all right." He peered out cautiously. The underbrush was black, sullenly quiet. Great swaths showed where the rays had swept the Earth. With a hoarse chuckle the grotesque giant climbed over the side of his ship. A search beam swung in his hand. He was in deep shadow. He swung the beam in a short arc. There was nothing, only matted vegetation. There was one thick thorny bush he noted, however, extending its bulk behind the bow of the ship. He stepped out a bit, away from the flier's shadow, and swung his beam directly at it. The invisible ray pierced through the interlacing twigs with ease. It picked out a prone figure, lying with arm extended.

The Mercutian chuckled again, but the chuckle changed almost immediately to a throaty cry of alarm. With a swiftness that went incongruously with his awkward bulk, his free arm dropped for his hand ray. There was a sharp burst of flame, a staccato bark. The Mercutian staggered, swayed with sullen pain-widened eyes, and pitched headlong forward.

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The prone figure in the bush leaped up, ran for him. The Mercutian was dead, drilled through the heart. Hilary sheathed his weapon grimly. His task was done. One thing, though. How much of the message had been transmitted? He must know. He vaulted over the side of the flier, fumbled around until he found the receiving apparatus. Then he waited, dreading to hear the silence broken. A minute passed, two minutes, and Hilary breathed a sigh of relief. The message had not gotten through.

Then it came--a tiny sparking, an intermittent hum. Hilary's heart sank with hammering blows. He tried to read the signals, but they were in code, or in the Mercutian tongue, which was just as bad. It was not necessary, though. Headquarters had heard; they knew.

Hilary did not waste an instant in vain regrets. Within an hour the gorge would be a vicious trap; he must get his men out at once. What then he did not know, nor bother. There was the more immediate problem.

He went down the swinging ladder hand over hand, not pausing for the rungs. Every instant was precious now. His hands scorched, but he did not feel the pain.

His flying body collided thudding with a heavy bulk beneath. There was a grunt, the rope jerked from his hands, and two bodies fell cursing, entangled, to the ground. Luckily it was not far distant. He sprang to his feet, found Grim heaving his bulk up more slowly.

"I was coming up after you," the giant growled. "You were gone too long. That's the thanks I get."

Hilary had no time for idle talk.

"Attention, men," he snapped. "We leave at once. You have five minutes to get your arms, ammunition clips and rations, light marching order."

Without a word they scattered alertly to their tasks. It was the discipline of veterans.

"You didn't get the Mercutian?" Grim was troubled.

"I got him all right," answered his leader laconically, "but too late. His message had gone through."

* * * * *

Five minutes later to the dot, the camp was lined up, accoutered complete. They were silent, tense, but smartly
erect. Hilary's flash glowed over them in the dark. Then he nodded approvingly.

"Fine work, men. Up that ladder, one at a time," he said. "Each man counts twenty slowly, one--two--three before he follows. Keep your distance, and move fast."

The first man sprang to the ladder, went up swiftly. Twenty seconds later, the next man's foot was on the bottom rung. Up and up they went, one after the other, each man counting off and climbing. Hilary watched them anxiously.

"Hope we make it," he muttered to Grim. "It'll take all of forty minutes to evacuate, and the Mercutians may be on us by then."

It was almost forty minutes to the dot when Hilary's head emerged from the cleft. He was the last man out. The men were lined up on a level bit, nervous, apprehensive. In spite of the discipline, heads automatically jerked upward, raked the sky for sign of the enemy.

Where to now?--thought Hilary. There were no more hiding places as perfect as the one they had just left. They were forced into the open, easy prey for the first lynx-eyed Mercutian. Sooner or later, they would be discovered, and then... A last hopeless glance at the mocking stars. Never had man yearned more for rain, oceans and oceans of it.

* * * * *

Hilary roused himself. Whatever of despair he felt did not appear in his staccato orders.

"We march at once, men," he said. "Scatter formation, five paces between. At the signal, take nearest cover, and prepare for action. Forward--"

"Too late," Grim's voice was flat, controlled.

Hilary looked around sharply. "What do you mean?"

"Look." Morgan's hand swept aloft. Through the darkling night, faintly visible in the feeble starlight--there was no moon--were driving shapes, a full score of them converging upon the little band.

One look was sufficient. Mercutian fliers hurrying in response to their fellow's signal. There was no time, no chance to escape.

"Very well, men." Hilary commanded, coldly calm. "Take cover. Do not fire until I give the order."

There was instant scattering. The men dived for whatever poor bit of protection they could find: jutting rocks, tree trunks, thin thorny bushes even.

Grim and Hilary crouched together behind a great boulder.

"How many pistols are there in the crowd?" Hilary asked quietly.

"Not many. Outside of your automatic and my dynol pistol, there are two other dynols and not more than a dozen automatics. If only we had the submachine gun with us, but Wat took it along, and he's gone."

"Not much chance, I'm afraid," said Hilary; "but we'll fight it out. Here they come."

The two men crouched lower. All about them was silence; not even a leaf stirred in the heavy breathlessness.

* * * * *

The driving fliers were easily visible now. Ominous hurtling projectiles, coming to crush out the last vestige of revolt on the conquered planet. On they came, purposefully, directly, knowing their way; a full score, converging in a scream of wind against their bows as they dropped straight for the hidden gorge.

It seemed to the hidden watchers as though they would crash to Earth with the speed of their swoop. But at one hundred feet aloft the fliers braked their headlong flight, hovered motionlessly in echelon formation.

A moment's breathless pause--to the hiding men it seemed eternity--and all the uneven terrain, rocks, trees, bushes, the soil itself, burst into glowing white crystal clearness. The Mercutians had turned on their search beams.

Hilary gazed clear through the rock behind which he crouched as though it were a transparency. All around him he saw the prone bodies of his men, naked to the view of all and sundry.

A hoarse derisive chuckle rasped from above. Hilary sprang to his feet; further attempt at concealment was useless. As he did so, the air seemed to split in two, there was a blinding rending crash. Not ten feet from where he stood, the ground tossed in torture. A man screamed--terribly. The first blow had been struck.

Hilary burned with a cold consuming anger. "Up, men, and fire. Aim forward about three feet back of the prow." That was where the pilot would be.

A scattered burst of cheers answered him. On all sides, like crystal ghosts, the Earthmen rose to their feet. They were fighting men.

Hilary took careful aim at a flier almost directly overhead and fired. He could have sworn he hit it, but nothing happened. Grim's dynol pistol flamed redly nearby. The tracer pellet scorched upward, impacted, against the hull of a flier. There was a faint detonation, and the next instant the air was full of flying fragments.

"Got that one," he said softly.

* * * * *
Hilary was conscious of a faint envy. His automatic seemed like a harmless popgun against that deadly weapon. But he drew another bead and fired again. With bated breath he awaited the result. Nothing. Hilary groaned, made as if to throw the useless gun away, when the flier he had aimed at wabbled, tried to right itself, and crashed in a swift erratic loop.

By now the pitifully few weapons of the Earthmen were popping. Two more of the enemy fliers hurtled to destruction. But as at a given signal, the air above them seemed suddenly to flame destruction. With the noise of a thousand thunderbolts the massed rays struck.

The groaning Earth tossed and heaved in billowing waves to escape its torture. The trees were blazing pyres. It seemed impossible for anything that lives within that area to escape instant destruction.

Hilary felt a wave of blinding heat envelop him, and he was thrown flat to the quaking ground. Frightful cries, screams of agony, came to his dulled ears as from a great distance. He heaved himself up wearily, scorched, smoldering, but otherwise unhurt.

"Grim," he whispered through thick cracked lips. "Grim, where are you?"

"Here." Strange how tranquil he sounded. A scarecrow of a figure arose almost at his right from a smoldering bush, a giant clothed in smoking rags. In the strange illumination of the search beams he seemed the wraith of a scarecrow.

"Thank God you're alive," Hilary croaked. "The others...?"

Figures were staggering up from the holocaust about them.

Grim's practised eyes counted. "About fifty left," he said, "just one half."

Hilary's voice rose suddenly, strongly. "Keep on firing, men." Once again his pistol barked defiance.

"God!" someone cried.

The massed ships above were gleaming faintly. Little shimmering sparkles ran over the hulls. They were going to ray again. Hilary went berserk, screamed strange oaths, fired again and again. Grim fired, more slowly. Two of the enemy ships left the formation, plunged headlong. But the shimmering grew brighter. In seconds the terrible bolts would be loosed. It was the end. The Earthmen knew it. They could not survive a second raying.

Grim shouted. Never before had Hilary heard him raise his voice to that pitch. His great arm was upflung.

CHAPTER XII
The Vagabond

High up, a dark blob against the feeble starlight, something was dropping; dropping with the speed of a plummet, straight for the massed Mercutian fliers. From outer space it seemed to come, a plunging ripping meteor.

A search beam must have swung hurriedly aloft, for it flamed into startling being; a spheroid, compact, purposeful, dropping with breathtaking velocity.

Something seemed to explode in Hilary's brain. A great cry wrenched out of his torn throat.

"The Vagabond."

Unbelievable, impossible. Yet he could not be mistaken. The Vagabond was coming home again!

By this time the Mercutians had seen it too. It meant suicide, that rushing projectile from outer space, but it would take along with it in the crash of its flight a goodly number of the Mercutian fliers. The Mercutians were no cowards, but death stared them openly in the face.

Instantly, all was in confusion. Forgotten the rebellious Earthmen below, forgotten everything but escape from the down-rushing thunderbolt.

Hilary, staring upward, could visualize the fliers working desperately at their controls. The clustered ships vibrated like a school of frightened fish poised for instant flight. Then they were in motion; scattering, wabbling in the terror of their retreat.

The Vagabond hurtled down among them like a hawk among pigeons. Its surface glowed with the speed of its flight. To Hilary's fascinated gaze it seemed as if there would be a terrific smash. But the Vagabond came to a screaming, braking halt directly in the center of the milling, scattering Mercutians.

Almost simultaneously the air resounded with staccato bursts. Ratatat-tat-a-tat.

"Good little Wat," Grim danced insanely. "He's cutting loose the submachine gun."

Hilary woke from his amazement with a start.

"Shoot, and shoot to kill," he shouted above the turmoil. "Don't let a single one get away."

* * * * *
Automatics spat their leaden hail, dynol pellets flamed redly, and over all resounded the rapid drum fire of the machine gun, pouring steel-jacketed death into the confused ranks of the Mercutians.

The monster invaders had lost their heads. Even then, they could have destroyed the Earthmen with their deadly spreading rays. But the strange apparition from above had demoralized them. No one thought of fighting: flight, safety, were the only thoughts in their minds.

Flier after flier went tailspinning to horrible death while his comrades fled in all directions. It was soon over. The greater number of the Mercutians were twisted smoldering wrecks. The few who escaped were rapidly diminishing dots in the cold starlight.

Its work finished, the rescuing space flier settled softly to the ground, in the midst of the embattled cheering Earthmen, temporarily gone insane.

The air-lock port yawned, and a slim figure darted out, straight into Hilary's outstretched arms.

"Joan!"

Behind her danced a small red-haired individual, his homely features grinning with delight. Under his arm swung heavily a submachine gun. He disappeared almost immediately into the vast bearlike grip of his gigantic friend. His shrill voice went on unceasingly, but strangely muffled, as Grim hugged him. Finally he extricated himself, ruffled, breathless, but still talking.

"What did I tell you, you big ox?" he shrilled. "We'll chase them off the Earth, sweep 'em out into space."

"Why, you little gamecock," the giant observed affectionately, "I'm beginning to believe you can do it."

"We thought you had gone for good," said Hilary, holding Joan tightly to him as if he feared to lose her again.

"What happened to you on the Robbins Building?"

"Can't get rid of us that easily, can he, Joan?" The little man smirked knowingly at the girl. "It was all very simple," he went on. "No sooner had you two left us than we heard the thud of a flier landing on the other end of the roof. The pilot looked out at us startled. We recognized each other simultaneously. It was our old friend--Urga."

Hilary clenched his fist. He had a good many scores to settle with the Cor.

Wat saw his action. "I did my best," he stated apologetically. "I ran for the machine gun. But by that time Urga had shot aloft again. Didn't seem as though he wanted to wait. I heard his whistle shrilling in the air. Fliers came thick as flies."

He spread his hands in a quaint gesture. "What could I do, Hilary?" his voice was appealing. "Any minute I expected to have a ray on us. I couldn't wait for you two, the Vagabond would have been a little pile of ashes. Besides, there was Joan. She kicked and struggled: she wanted to stay for you, but I shoved her in the ship, locked the port, and went scooting up like a rocket. You should have seen the Mercutians scatter."

For the first time in his life words seemed to fail him. "You--are--not--angry?" he fumbled, looking for all the world like a bedraggled dog who knows he has been in mischief.

"Angry?" Hilary fairly whooped. "What for? For saving the ship, Joan, all of us? Why, you little bit of pure gameness, you did the only sensible thing."

Wat grinned from ear to ear.

"But why," Grim interrupted, "didn't you have sense enough to come back here, instead of scaring everybody to death?"

Wat turned on him indignantly. "Sure," he squeaked, "and bring all the Mercutians along with me? No sir, I shot straight up into the stratosphere, and headed for the Canadian woods. Felt we'd be safe there."

Hilary looked at him. "I've heard," he said overcasually, "that an accident happened to one of the Mercutian diskoids. Know anything about it?"

The redhead grinned. "I was the accident. I wasn't staying cooped up in the wilderness. Joan and I decided we'd do some scouting before we came back; see what was happening over the rest of the world. We were returning from one of those little expeditions, cruising about fifty miles up, when we almost bumped into the diskoid. We saw them first; we had just come out of the shadow of the Earth; they were in the sun. I let them have it before they had a chance to turn on their rays. The bullets punctured them clean; must have let out their air. I didn't wait to see; ducked back into the shadow again."

"How did you get here in the nick of time?" asked Hilary suddenly. "A few minutes later and there would have been no rescue."

Wat looked, at him in some surprise.

"Why, we got your signal, of course."

"Signal?" Hilary echoed. "I never--" Then he paused. Morgan was grinning sheepishly, "Here, what do you know about this?" he queried sharply.
The giant's grin widened. "Just a little," he admitted. "I'd been playing around with my transmitter. Used some of the spare equipment we had cached for the Vagabond, and stepped up the sending radius to a thousand miles or so."

"We received your call in the woods north of Lake Ontario," Joan interrupted.

Grim nodded, gratified. "I thought it might work," he rumbled. "You see," he explained to Hilary, "ever since I heard about that diskoid, I knew that the Vagabond was responsible. But you refused to believe it. So I worked in secret, rigging up the apparatus. Didn't want to stir up false hopes. I finished it yesterday. When we were discovered, I started sending."

"It took us just ten minutes over the hour to get here from a standing start," Wat boasted. "We almost burned up the old machine smashing through the air, didn't we Joan?"

She nodded happily from her cozy position in the crook of Hilary's arm.

Hilary looked long and steadily at his friends.

"Well--" he finally began, when someone cried out sharply.

A dark shape shot over the rim of the mountainside, swooped down at them in one fierce lunge. Involuntarily the Earthmen threw themselves flat on the ground to avoid the tremendous rush of its flight. At one hundred feet it banked sharply, a circle of light gleamed, and a long blazing streamer thrust its relentless finger at the prostrate figures of the Earthmen.

There was a blinding flash, a roar. Hilary was on his feet, bullets spitting rapidly. But already the lone Mercutian flier had completed his bank, and was zooming out of range. Hilary watched the flier grow fainter and fainter in the starlit distance. Almost he could hear the far-off hoarse chuckle of its pilot.

Then he turned to survey the damage. The Earthmen were up, growling low heartfelt curses. That one blast had been catastrophic.

* * * * *

There on the ground lay the smoking ruins of the Vagabond, beloved companion of his space wanderings. For a moment Hilary gave way to a deep-seated despair. This was the end of all his plannings. He had built high hopes on the Vagabond in his carefully laid schemes for overcoming the Mercutians. He stood as one stunned.

Someone cried: "A curse is upon us; let us scatter before it is too late!"

"It acted on Hilary like a cold shower, that cry of despair."

"No," his voice resounded strong and vibrant. "We did not need the Vagabond. It never was part of my plans."

A lie, of course, but most necessary. "That Mercutian saved me the trouble of finding a hiding place for it. Come, let us march. At dawn it rains, I know it will."

"You've said that every day since the weather machine was smashed," a voice cried out from the rear.

Hilary paused, thrown off his balance momentarily. Yet a second's hesitation would be fatal. It was Joan who answered for him. She sprang forward, lithe and exalted, her dark eyes flashing even in the dark.

"I'll tell you how he knows. I myself had almost forgotten. Tomorrow is exactly two weeks since the weather machine was destroyed. My father, Martin Robbins, built it. He told me then that its effects were so powerful that they lasted for two weeks, even with the machine turned off. Only positive action could bring an immediate reversal, of weather conditions. That's how he knows."

Joan had turned the tide. The waverers turned as one man to Hilary. "Lead on! We follow!"

"Very well," he stated quietly. "We can't remain here. The Mercutians will be back soon in overwhelming force, burning for revenge. We march."

To Joan, in barely audible tones: "Is that true, what you said?"

"I--I think so. I remember Dad mentioned a time limit. I think it was two weeks."

"If it isn't, we're facing a damned unpleasant prospect to-morrow," he said grimly.

CHAPTER XIII

The Last Battle

Dawn found the little band still struggling over the thick-forested mountains in a desperate attempt to avoid detection. They were footsore, weary, their clothes shredded by innumerable sharp thorns, their eyes bloodshot from lack of sleep. Overhead, the paling sky was already dotted with the fliers of the Mercutians; faint sounds came to them of the clumsy thrashing of enemy patrols as they beat the woods for the fugitives. The Mercutians were putting forth all their resources to seek out and destroy these irritant foci of revolt.

At length Hilary called a halt. They were in a little valley, not far from Bear Mountain. It offered some protection from the searchers. The enclosing hills would mask them, from all but search beams directly overhead.
"It is no use going any farther," he said wearily. "We all need sleep and rest. Sooner or later they'll find us, no matter where we go, and then--" He shrugged his shoulders.

The weary, panting men threw themselves down upon the ground, too tired even to eat. Immediately they were in a drugged sleep. Joan was sleeping too, her face pale drawn, but like a little child's in her slumber. Hilary watched her with a sharp pang in his heart. What would the next few hours bring to her, to all of them?

Nor did Grim and Wat sleep either. The three of them squatted on their heels, silent, as the cold dawn wind swept with a great sigh through the valley.

The stars were paling now, the purple sky was enswathing itself in pearly grays. Something glowed pinkly overhead; and was extinguished almost immediately by the prevailing gray.

Hilary started violently. "Did you see that?"

"See what?" Grim was drunk for lack of sleep.

Hilary was on his feet, peering upward. "I thought I saw--there, there it is again."

The other two were on their feet also, weariness forgotten, heads thrown back.

High overhead, in the overturned cup of the sky, an irregular pink wisp formed before their wondering eyes, and vanished again. But more slowly, than the first time.

"Well?" asked Wat, puzzled.

"A cloud." Hilary's voice was a prayer.

"Hell," said Wat disgustedly. "If that's a cloud I'm a Mercutian. There wouldn't be enough water there to moisten a canary seed."

"And even if there were it wouldn't matter now," said Grim calmly. "We're discovered."

* * * * *

A long slim flier shot athwart the brightening sky, paused suddenly in flight as though jerked by an invisible string. The next instant the valley was illumined by a transparent glow. It enveloped the Earthmen, made crystal figurines of the most solid among them. They seemed like wraiths through which, as in a glass, more could be seen beyond. The solid ground, the rocks, were transparencies floating in an ocean of airy nothingness. A search beam!

The flier hung steady, high overhead, holding them in the dissolving area of his beam. Too high to ray them but also too high for their futile bullets. The Mercutians no longer underrated the fighting abilities of their erstwhile slaves.

"He's sending out messages for help," observed Hilary.

"Let's take it on the run," Wat suggested.

"No good. Where could we run to that his beam couldn't follow?"

"Well, we can only die once," Wat observed cheerfully.

"And take as many Mercutians with us as we can," Grim amended. "That's one lucky thing. Their rays have no greater range than our bullets."

"Except the diskoids," said Hilary. "Here's your chance, Wat, to play with your rattle."

The red head, who had lugged the heavy machine gun all the way with him, patted its snout affectionately. "It plays the devil's tattoo," he said.

More fliers materialized in the by now brighter blue of early morning. The sun was just peeping over the serrated tops of the mountains. But still they did not attack.

"Afraid of us," Wat chuckled. "Bet they'll send to Mercury for the whole damn army before they come for us."

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The first shock was over. With the inevitable staring them in the face, the men had achieved something of a gay recklessness. Hilary found some natural recessions under overhanging masses of rocks that would afford protection from the searing power of the rays. To be effective, the fliers would have to land in the valley or fly low, thus exposing themselves to the raking fire of the Earthmen's weapons. Hilary posted his little band skilfully underneath these natural shelters in such a way that they would be able to command the bit of sky from every angle.

The men jerked and fidgeted. The heavens darkened with massed fliers, and still they came. The Mercutians were taking no chances.

"Plenty of guests at our funeral," Wat chuckled, sighting along the barrel of his gun.

Hilary left the jesting to the others. He was watching the skies intently.

Joan slipped her arm through his. "You see something that we don't. What is it?"

He nodded with an intent frown. "There are clouds forming up there. The first I've seen since I came back to this planet. Rain clouds, too, if I know anything about it. Look."

Joan tilted her head backward. Thin scuds of vapor darted across the sky, driven by the morning breeze; dissolved and reformed a little farther on. Tenuous wisps, evanescent, wraithlike. The sun shone steadily, unobscured.
"Those little things," said Joan unbelievingly. "Why, if that's all you're depending on, we're finished."
"Nevertheless they are rain clouds. But when the rain will come is another matter. Very likely too late."
Grim came hurriedly over from his post near the entrance to the little valley. His face was placid as ever, but his eyes were worried.
"We are being surrounded," he stated calmly.

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Hilary sprang to his feet. "What do you mean?"
"Listen. Do you hear it?"
Far down the overgrown trail they had followed into the valley came the noise of heavy stumbling feet, innumerable feet.
"They are taking no chances," said Grim, his countenance unchanged.
Hilary looked swiftly around. The valley was a cul-de-sac, surrounded on three sides of its narrow oblong by precipitous hills. From the fourth side, the Mercutians were coming--an army, from the sound of them. Overhead were a hundred fliers, and more coming. The trap was sprung!
Hilary's voice rang out. "All men without guns down the valley to repel invaders. Those with guns remain at your positions; watch the fliers. Wat Tyler in command."
With a joyous cry the Earthmen started for the narrow mouth of the valley, all without guns. Gone was the helpless feeling of before; now they could fight too. Axes, spades, pitchforks, sticks and stones even, were their weapons.
Hilary thrust his automatic into Joan's hand. "You use it, dear. I won't need it. Come on, Grim."
Morgan smiled slowly, handed over his dynol pistol without a word to a weaponless man and stalked after his leader. His great hand clutched and unclutched unconsciously. This was what he wanted, hand-to-hand fighting.

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By the time they reached the foot of the valley, the noise of the oncoming Mercutians sounded like the rumbling of thunder. Secure in their numbers there was no thought of concealment.
The Earthmen were pitifully few, only thirty of them, and wretchedly armed. Hilary disposed of them up the slope of the hill on either side, set them to loosening jutting boulders. He was in command on one slope. Grim on the other.
In a minute the Mercutians would be upon them. A simultaneous attack, no doubt; the fliers dropping low to loose their deadly rays from above as the land force attacked with their hardly less deadly hand rays.
Hilary shot a last hasty glance aloft. His heart gave a great bound. The thin insubstantial vapors of a little before had solidified, taken on a grosser leaden hue. The sky was a sullen gray, shot through intermittently with the broad flares of a sun valiantly struggling to reassert its long undisputed sway. Little flickers of lightning played around the ragged edges of the clouds.
To the most unobservant it was evident now that a storm was in the making. But might it not be too late? The sun still shone, and as long as its light pierced through, the weapons of the Mercutians held all their deadly potency.
The alien invaders sensed the urgent necessity for quick action, for the fliers were dropping now, hundreds of them, to within range. Hilary heard the shouted orders of the Mercutians Cors, the crashing forward of a mighty host, and then the front of the attack burst out of the trees in an engulfing flood of gigantic unwieldy bodies and gray warty faces.
A quick view of the stout ungainly Viceroy, Artok, another of the coldly saturnine visage of Urga in the front rank, and with a roar of gutturals, the attack was on.

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Down from above came a myriad blinding flashes, turning the inclosed valley into an inferno of heat and rocking, boiling, shattered ground. Up the valley shot the massed hand rays of the hundreds as they swept along in close-packed trot.
It seemed as if nothing could exist in that blazing, screaming hell. Hilary, stunned, shaken, scorched, felt as if he were the only one alive. Yet as the front of the attack washed up before him, he did not hesitate. He sprang to his feet, swung the nicely hefted long-handled ax he had picked up, uttered a war whoop that went back to remote ancestors, and flung himself headlong into the boiling mass of Mercutians.
As he did so, he caught a fleeting, comforting glimpse of Grim rising to his full height on the other slope, huge hands raised, and crashing down barehanded, silent, into the ranks of the enemy. A cheer went up, a faint ragged cheer, and other figures popped up out of nowhere and dropped feet first into the fray.
Hilary found himself engulfed in a welter of figures that towered heads above him. His ax swung up and down, bit into something soft and yielding. The Mercutian screamed horribly; blood spouted from his wide-split shoulder. He fell stumbling to his knees, and Hilary stepped into the little open space. That gave him more elbow room. A
furious towering monster swung his tube around in the press. Hilary ducked as the sizzling ray sped over his head. There were howls of pain as the spreading beam cut a burning swath through the packed Mercutians.

Thereafter no more tubes were raised. The quarters were too close. It was to be hand-to-hand fighting; thousands of giant Mercutians against a handful of puny Earthmen.

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Hilary swung his red-dripping ax in ever-widening circles. At every swing a Mercutian tumbled. A little space opened around him, literally hewn out of living flesh. But with strange fierce cries he threw himself again and again into the wall of bodies. There and there only was salvation possible where the sun-tubes could not be used.

Far over to one side he caught glimpses of bodies in violent upheavings, bodies that thrust explosively to either side as from the sharp prow of an invisible ship. Then a great figure heaved staggering into view, bloody, gashed, great arms encircling Mercutian heads, smashing them together like eggshells, flinging them apart, seizing others. Grim Morgan, berserk with bare hands.

Here and there in his own travail Hilary sighted little foci of struggle, Earthmen with ax and pitchfork and spade battling valiantly in a sea of Mercutians. A swirl, an eddy, and all too often a sudden surge and flowing of gray warty faces, and smooth rippleless heads where an Earthman had gone down, trampled into pulp.

Hilary's first rush with swinging flashing ax had caught the Mercutians unawares. They had relied upon their sun-tubes, and in the mêlée succeeded only in inflicting frightful havoc on their own kind. Now, however, they came for Hilary in a solid mass, huge three-fingered hands flailing, seeking to thrust him down by sheer weight of numbers. He swung and swung again, the ax bit deep, but still they came. His arm grew weary from so much slaughter, it rose more and more slowly, and then it rose no more. The bloody ax was wrenched from his nerveless fingers, and he was down, smothered by innumerable trampling bodies. Over him the tide swirled smooth. Heavy feet kicked and battered at his body, hands reached down to pluck and rip at him.

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Feebly he tried to fend them off, but the shodden hoofs smashed him down again, gouged at his unprotected face. He struggled, but soon he would not struggle any more.

From afar came to his dimming ears below, a huge shout that shook the ground. Feet pounded him down into semi-unconsciousness; there was a mighty shuffling to and fro over him, and then the feet were gone. A huge well-remembered hand, caught him, heaved him upright. It was Grim. His face was a wreck, battered out of all semblance, but those blue mild eyes were flaming with an unholy light.

Hilary tottered, and the giant shook him.

"Wake up," he bawled; "they're coming again."

With a great effort Hilary cleared his numbed brain, saw the resurgence of the temporarily beaten herd. His fists clenched automatically.

"Good boy," Grim whooped. "Let's get them."

Then they were engulfed, fighting back to back. Hilary seemed to be fighting in a dream. He never had a clear conception of what happened. Faces thrust themselves into his own, furious, contorted; his fist went out mechanically, thudded against something soft, and the face disappeared. Hands reached plucking for him; he thrust them off, and swung left and right again.

Once he looked dully upward. The sky was gray slate now, festooned with bellying black. No sign of the sun; not the least ray could pierce. The fliers hung aimless overhead, no sparkle to their hulls. The valley was dark too; the terrible rays had ceased raking it with an inferno of heat.

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Just before he lowered his upflung face to smash his fist into another face, something wet blobbed on his forehead. A raindrop? Perhaps, but he was too far gone to care now. Life was an endless series of howling Mercutians to thrust fists into.

A cheer rose high, punctured by quick sharp explosions of sound. Guns. Those few remaining of the fighting Earthmen farther up the valley, no longer menaced by the futile fliers, had come down to help their weaponless brethren. Wat's voice was shrill in the land, yelling, exhorting, screaming. A familiar rat-a-tat-a-tat came down the wind. The submachine gun was spitting steel-jacketed death. Where was Joan? Hilary wondered wearily.

A face towered over him, a face he knew. Urga. The Mercutian was no longer impassive; his gray countenance was distorted with hideous hate. "I'll break you in two," he mouthed, and lunged for Hilary.

The Earthman came out of his daze at the sight of the other. Strength seemed to flow back into his weary body. His fist came up, clean with all the power that was left in him. It went home with a soul-satisfying crunch. Urga's gray gash of a mouth seemed to smear slowly over the rest of his face. A wild animal scream burst from him as he sagged. Then a swirl of other Mercutians anxious to get at the Earthman eddied him out of view.

Hilary felt better. Now he could die content. Even with their guns, what could a handful of Earthmen do against
the resistless, ever-coming tide of Mercutians, thousands of them?

* * * * *

It was raining now, slowly at first, large scattered drops, then heavier and heavier, until the fogged air was a driving sheet of water.

What of it?—thought Hilary bitterly as he fought and slipped and stumbled in the slimy, bloody muck that was now the ground. The Mercutians' weapons were useless, but they did not need them any more. Sheer numbers would overwhelm the Earthmen.

Then to his amazement something happened. The heavens, long outraged by the artificial repression of the weather machine, kicked over all traces and opened their sluices in earnest. The sky was one vast waterfall. The elements roared and rocked; the valley was knee deep already in a spate of waters.

Hilary splashéd and waded after his enemies. But they were going. They staggered and trembled in every shaking limb, heedless now of the Earthmen. They slipped and fell into the flood, and stayed there, motionless under the waters. Like Pharaoh's army they were being drowned before the amazed Earthmen's very eyes.

On their own planet it never rained; there was no water except for carefully hoarded underground lakes. This first taste of real Earth weather was too much for them. They could not withstand the driving rain, the water swirling round their knees. All the strength went out of their shaggy frames, their knees buckled and down they went, helpless, destroyed by a natural phenomenon to which they were unaccustomed. They had actually been smothered by the humidity!

Hilary's voice was strong again. With great shouts, he rallied his men. A pitiful handful; only fifteen of the fifty that had entered the valley. But Joan was alive, her face black with burned skin, otherwise unhurt. Wat's grin rose superior to a mask of raw flesh, and Grim, bleeding from a hundred wounds, was still a tower of strength.

* * * * *

It was a strange sight as they stood almost waist deep in the flood, the storm beating down upon them, hundreds and hundreds of bodies floating, bumping against them.

"We must clinch our victory, men," Hilary shouted above the roar of the elements. "We must go to arouse the Earth, sweep the Mercutians into the oceans while the storm lasts, or all our work will go for naught."

A great cheer went up from the little band, and without resting, without food or sleep, they waded their way out of the valley, into civilization once more, carrying their message, arousing the peoples, gathering to themselves like a tiny snowball rolling down a mountainside, a huge swelling army of jubilant Earthmen, Earthwomen, too, moving in resistless flood down upon New York.

The rest is history. Like a torrent they swept down upon the cowed, weakened Mercutians. Those that did not escape in the great diskoids back to their own torrid, waterless planet were searched out, torn to pieces by the infuriated Earth peoples.

For five days and five nights the storm raged, all over the world. The floodgates were opened; outraged nature was taking her revenge. For five days and five nights the sun was hidden behind bucketing gray skies. And for five days and five nights, Americans, English, Chinese, Zulus, Australians, Russians, Bushmen, Argentinians, animated by a common purpose, rose gleefully and smote the invaders. When the sun finally peeped once more from behind the thick blanket of clouds, not a Mercutian remained. Few had escaped; the rest would never see Mercury again.

"We've won," Joan sighed happily, after it was all over, and was able to nestle once more comfortably in Hilary's arms. "Thanks to you."

"You forget Grim Morgan and Wat Tyler, dear."

"Ye-es, they helped, too," she admitted grudgingly; "but without you, what could they have done?"

Hilary started to protest, but over her crown of shining hair, he saw Grim and Wat watching him, grinning like two monkeys. Wat's thumb was raised to his nose in an immemorial gesture.

"You're right," said Hilary defiantly. "What could they have done?"
Raging, Trooper Lane hovered three thousand feet above Tammany Square.

The cool cybrain surgically implanted in him was working on the problem. But Lane had no more patience. They'd sweat, he thought, hating the chill air-currents that threw his hovering body this way and that. He glared down at the three towers bordering on the Square. He spat, and watched the little white speck fall, fall. Lock me up in barracks. All I wanted was a little time off. Did I fight in Chi for them? Damn right I did. Just a little time off, so I shouldn't blow my top. Now the lid's gone.

He was going over all their heads. He'd bowled those city cops over like paper dolls, back at the Armory. The black dog was on Lane's back. Old Mayor himself was going to hear about it.

Why not? Ain't old Mayor the CinC of the Newyork Troopers?

The humming paragrv-paks embedded beneath his shoulder blades held him motionless above Newyork's three administrative towers. Tammany Hall. Mayor's Palace. Court House. Lane cursed his stupidity. He hadn't found out which one was which ahead of time. They keep Troopers in the Armory and teach them how to fight. They don't teach them about their own city, that they'll be fighting for. There's no time. From seven years old up, Troopers have too much to learn about fighting.

The Mayor was behind one of those thousands of windows.

Old cybrain, a gift from the Trooper surgeons, compliments of the city, would have to figure out which one.

Blood churned in his veins, nerves shrieked with impatience. Lane waited for the electronic brain to come up with the answer.

Then his head jerked up, to a distant buzz. There were cops coming. Two black paragrv-boats whirred along the translucent underside of Newyork's anti-missile force-shield, the Shell.

Old cybrain better be fast. Damn fast!

The cybrain jolted an impulse through his spine. Lane somersaulted. Cybrain had taken charge of his motor nerves. Lane's own mind was just along for the ride.

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His body snapped into a stiff dive position. He began to plummet down, picking up speed. His mailed hands glittered like arrowheads out in front. They pointed to a particular window in one of the towers. A predatory excitement rippled through him as he sailed down through the air. It was like going into battle again. A little red-white-and-green flag fluttered on a staff below the window. Whose flag? The city flag was orange and blue. He shrugged away the problem. Cybrain knew what it was doing.

The little finger of his right hand vibrated in its metal sheath. A pale vibray leaped from the lensed fingertip. Breakthrough! The glasstic pane dissolved. Lane streamed through the window.

The paragrv-paks cut off. Lane dropped lightly to the floor, inside the room, in battle-crouch. A 3V set was yammering. A girl screamed. Lane's hand shot out automatically. A finger vibrated. Out of the corner of his eye, Lane saw the girl fold to the floor. There was no one else in the room. Lane, still in a crouch, chewed his lip.

The Mayor?

His head swung around and he peered at the 3V set. He saw his own face.

"Lashing police with his vibray," said the announcer, "Lane broke through the cordon surrounding Manhattan Armory. Two policemen were killed, four others seriously injured. Tammany Hall has warned that this man is extremely dangerous. Citizens are cautioned to keep clear of him. Lane is an insane killer. He is armed with the latest military weapons. A built-in electronic brain controls his reflexes--"

"At ease with that jazz," said Lane, and a sheathed finger snapped out. There was a loud bang. The 3V screen dissolved into a puddle of glasstic.

The Mayor.

Lane strode to the window. The two police boats were hovering above the towers. Lane's mailed hand snapped open a pouch at his belt. He flipped a fist-sized cube to the floor.

The force-bomb "exploded"--swelled or inflated, really, but with the speed of a blast. Lane glanced out the window. A section of the energy globe bellied out from above. It shaded the view from his window and re-entered the tower wall just below.
Now the girl.
He turned back to the room. "Wake up, outa-towner." He gave the blonde girl a light dose of the vibray to slap her awake.
"Who are you?" she said, shakily.
Lane grinned. "Trooper Lane, of the Newyork Special Troops, is all." He threw her a mock salute. "You from outa-town, girlie. I ain't seen a Newyork girl with yellow hair in years. Orange or green is the action. Whatcha doing in the Mayor's room?"
* * * * *
The girl pushed herself to her feet. Built, Lane saw. She was pretty and clean-looking, very out-of-town. She held herself straight and her blue-violet eyes snapped at him.
"What the devil do you think you're doing, soldier? I am a diplomat of the Grassroots Republic of Mars. This is an embassy, if you know what that means."
"I don't," said Lane, unconcerned.
"Well, you should have had brains enough to honor the flag outside this window. That's the Martian flag, soldier. If you've never heard of diplomatic immunity, you'll suffer for your ignorance." Her large, dark eyes narrowed. "Who sent you?"
"My cybrain sent me."
She went openmouthed. "You're Lane."
"I'm the guy they told you about on the 3V. Where's the Mayor? Ain't this his place?"
"No. No, you're in the wrong room. The wrong building. That's the Mayor's suite over there." She pointed. "See where the balcony is? This is the Embassy suite. If you want the Mayor you'll have to go over there."
"Whaddaya know," said Lane. "Cybrain didn't know, no more than me."
The girl noticed the dark swell of the force-globe. "What's that out there?"
"I told you, I'm an ambassador. From Mars. I'm on a diplomatic mission."
"Yeah? Mars a big city?"
She stared at him, violet eyes wide. "The planet Mars."
"Planet? Oh, that Mars. Sure, I've heard of it--you gotta go by spaceship. What's your name?"
"Gerri Kin. Look, Lane, holding me is no good. It'll just get you in worse trouble. What are you trying to do?"
"I wanna see the Mayor. Me and my buddies, we just come back from fighting in Chi, Gerri. We won. They got a new Mayor out there in Chi. He takes orders from Newyork."
Gerri Kin said, "That's what the force-domes did. The perfect defense. But also the road to the return to city-states. Anarchy."
Lane said, "Yeah? Well, we done what they wanted us to do. We did the fighting for them. So we come back home to Newyork and they lock us up in the Armory. Won't pay us. Won't let us go nowhere. They had cops guarding us. City cops." Lane sneered. "I busted out. I wanna see the Mayor and find out why we can't have time off. I don't play games, Gerri. I go right to the top."
Lane broke off. There was a hum outside the window. He whirled and stared out. The rounded black hulls of the two police paragrav-boats were nosing toward the force-screen. Lane could read the white numbers painted on their bows.
A loudspeaker shouted into the room: "Come out of there, Lane, or we'll blast you out."
"You can't," Lane called. "This girl from Mars is here."
"I repeat, Lane--come out or we'll blast you out."
Lane turned to the girl. "I thought you were important."
* * * * *
She stood there with her hands together, calmly looking at him. "I am. But you are too, to them. Mars is millions of miles away, and you're right across the Square from the Mayor's suite."
"Yeah, but--" Lane shook his head and turned back to the window. "All right, look! Move them boats away and I'll let this girl out!"
"No deal, Lane. We're coming in." The police boats backed away slowly, then shot straight up, out of the line of vision.
Lane looked down at the Square. Far below, the long, gleaming barrel of a blaster cannon caught the dim light filtering down through Newyork's Shell. The cannon trundled into the Square on its olive-drab, box-shaped caterpillar mounting and took up a position equidistant from the bases of the three towers.
Now a rumble of many voices rose from below. Lane stared down to see a large crowd gathering in Tammany
Square. Sound trucks were rolling to a stop around the edges of the crowd. The people were all looking up.

Lane looked across the Square. The windows of the tower opposite, the ones he could see clearly, were crowded with faces. There were white dot faces on the balcony that Gerri Kin had pointed out as the Mayor's suite.

The voice of a 3V newscaster rolled up from the Square, reechoing against the tower walls.

"Lane is holding the Martian Ambassador, Gerri Kin, hostage. You can see the Martian tricolor behind his force-globe. Police are bringing up blaster cannon. Lane's defense is a globe of energy similar to the one which protects Newyork from aerial attack."

Lane grinned back at Gerri Kin. "Whole town's down there." Then his grin faded. Nice-looking, nice-talking girl like this probably cared a lot more about dying than he did. Why the hell didn't they give him a chance to let her out? Maybe he could do it now.

Cybrain said no. It said the second he dropped his force-screen, they'd blast this room to hell. Poor girl from Mars, she didn't have a chance.

Gerri Kin put her hand to her forehead. "Why did you have to pick my room? Why did they send me to this crazy city? Private soldiers. Twenty million people living under a Shell like worms in a corpse. Earth is sick and it's going to kill me. What's going to happen?"

Lane looked sadly at her. Only two kinds of girls ever went near a Trooper—the crazy ones and the ones the city paid. Why did he have to be so near getting killed when he met one he liked? Now that she was showing a little less fear and anger, she was talking straight to him. She was good, but she wasn't acting as if she was too good for him.

"They'll start shooting pretty quick," said Lane. "I'm sorry about you."

"I wish I could write a letter to my parents," she said.

"What?"

"Didn't you understand what I said?"

"What's a letter?"

"You don't know where Mars is. You don't know what a letter is. You probably can't even read and write!"

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Lane shrugged. He carried on the conversation disinterestedly, professionally relaxed before battle. "What's these things I can't do? They important?"

"Yes. The more I see of this city and its people, the more important I realize they are. You know how to fight, don't you? I'll bet you're perfect with those weapons."

"Listen. They been training me to fight since I was a little kid. Why shouldn't I be a great little fighter?"

"Specialization," said the girl from Mars.

"What?"

"Specialization. Everyone I've met in this city is a specialist. SocioSpecs run the government. TechnoSpecs run the machinery. Troopers fight the wars. And ninety per cent of the people don't work at all because they're not trained to do anything."

"The Fans," said Lane. "They got it soft. That's them down there, come to watch the fight."

"You know why you were kept in the Armory, Lane? I heard them talking about it, at the dinner I went to last night."

"Why?"

"Because they're afraid of the Troopers. You men did too good a job out in Chi. You are the deadliest weapon that has ever been made. You. Single airborne infantrymen!"

Lane said, "They told us in Trooper Academy that it's the men that win the wars."

"Yes, but people had forgotten it until the SocioSpecs of Newyork came up with the Troopers. Before the Troopers, governments concentrated on the big weapons, the missiles, the bombs. And the cities, with the Shells, were safe from bombs. They learned to be self-sufficient under the Shells. They were so safe, so isolated, that national governments collapsed. But you Troopers wiped out that feeling of security, when you infiltrated Chi and conquered it."

"We scared them, huh?"

Gerri said, "You scared them so much that they were afraid to let you have a furlough in the city when you came back. Afraid you Troopers would realize that you could easily take over the city if you wanted to. You scared them so much that they'll let me be killed. They'll actually risk trouble with Mars just to kill you."

"I'm sorry about you. I mean it, I like--"

At that moment a titanic, ear-splitting explosion hurled him to the carpet, deafened and blinded him. He recovered and saw Gerri a few feet away, dazed, groping on hands and knees.

Lane jumped to the window, looked quickly, sprang back. Cybrain pumped orders to his nervous system.

"Blaster cannon," he said. "But just one. Gotcha, cybrain. I can beat that."
He picked up the black box that generated his protective screen. Snapping it open with thumb-pressure, he turned a small dial. Then he waited. 

Again an enormous, brain-shattering concussion.

Again Lane and Gerri were thrown to the floor. But this time there was a second explosion and a blinding flash from below.

Lane laughed boyishly and ran to the window.

"Look!" he called to Gerri.

* * * * *

There was a huge gap in the crowd below. The pavement was blackened and shattered to rubble. In and around the open space sprawled dozens of tiny black figures, not moving.

"Backfire," said Lane. "I set the screen to throw their blaster beam right back at them."

"And they knew you might--and yet they let a crowd congregate!"

Gerri reeled away from the window, sick.

Lane said, "I can do that a couple times more, but it burns out the force-globe. Then I'm dead."

He heard the 3V newscaster's amplified voice: "--approximately fifty killed. But Lane is through now. He has been able to outthink police with the help of his cybrain. Now police are feeding the problem to their giant analogue computer in the sub-basement of the Court House. The police analogue computer will be able to outthink Lane's cybrain, will predict Lane's moves in advance. Four more blaster cannon are coming down Broadway--"

"Why don't they clear those people out of the Square?" Gerri cried.

"What? Oh, the Fans--nobody clears them out." He paused. "I got one more chance to try." He raised a mailed glove to his mouth and pressed a small stud in the wrist. He said, "Trooper HQ, this is Lane."

A voice spoke in his helmet. "Lane, this is Trooper HQ. We figured you'd call."

"Get me Colonel Klett."

Thirty seconds passed. Lane could hear the clank of caterpillar treads as the mobile blaster cannon rolled into Tammany Square.

The voice of the commanding officer of the Troopers rasped into Lane's ear: "Meat-head! You broke out against my orders! Now look at you!"

"I knew you didn't mean them orders, sir."

"If you get out of there alive, I'll hang you for disobeying them!"

"Yes, sir. Sir, there's a girl here--somebody important--from Mars. You know, the planet. Sir, she told me we could take over the city if we got loose. That right, sir?"

There was a pause. "Your girl from Mars is right, Lane. But it's too late now. If we had moved first, captured the city government, we might have done it. But they're ready for us. They'd chop us down with blaster cannon."

"Sir, I'm asking for help. I know you're on my side."

"I am, Lane." The voice of Colonel Klett was lower. "I'd never admit it if you had a chance of getting out of there alive. You've had it, son. I'd only lose more men trying to rescue you. When they feed the data into that analogue computer, you're finished."

"Yes, sir."

"I'm sorry, Lane."

"Yes, sir. Over and out."

Lane pressed the stud on his gauntlet again. He turned to Gerri.

"You're okay. I wish I could let you out. Old cybrain says I can't. Says if I drop the force-globe for a second, they'll fire into the room, and then we'll both be dead."

* * * * *

Gerri stood with folded arms and looked at him. "Do what you have to do. As far as I can see, you're the only person in this city that has even a little bit of right on his side."

Lane laughed. "Any of them purple-haired broads I know would be crazy scared. You're different."

"When my grandparents landed on Mars, they found out that selfishness was a luxury. Martians can't afford it."

Lane frowned with the effort of thinking. "You said I had a little right on my side. That's a good feeling. Nobody ever told me to feel that way about myself before. It'll be better to die knowing that."

"I know," she said.

The amplified voice from below said, "The police analogue computer is now hooked directly to the controls of the blaster cannon battery. It will outguess Lane's cybrain and check his moves ahead of time."

Lane looked at Gerri. "How about giving me a kiss before they get us? Be nice if I kissed a girl like you just once in my life."

She smiled and walked forward. "You deserve it, Lane."

"Look!" he called to Gerri.
He kissed her and it filled him with longings for things he couldn't name. Then he stepped back and shook his head. "It ain't right you should get killed. If I take a dive out that window, they shoot at me, not in here."

"And kill you all the sooner."

"Better than getting burned up in this lousy little room. You also got right on your side. There's too many damn Troopers and not enough good persons like you. Old cybrain says stay here, but I don't guess I will. I'm gonna pay you back for that kiss."

"But you're safe in here!"

"Worry about yourself, not about me." Lane picked up the force-bomb and handed it to her. "When I say now, press this. Then take your hand off, real fast. It'll shut off the screen for a second."

He stepped up on to the window ledge. Automatically, the cybrain cut in his paragrav-paks. "So long, outatowner. Now!"

He jumped. He was hurtling across the Square when the blaster cannons opened up. They weren't aimed at the window where the little red-white-and-green tricolor was flying. But they weren't aimed at Lane, either. They were shooting wild.

Which way now? Looks like I got a chance. Old cybrain says fly right for the cannons.

He saw the Mayor's balcony ahead. Go to hell, old cybrain. I'm doing all right by myself. I come to see the Mayor, and I'm gonna see him.

Lane plunged forward. He heard the shouts of frightened men.

He swooped over the balcony railing. A man was pointing a blaster pistol at him. There were five men on the balcony—emergency! Years of training and cybrain took over. Lane's hand shot out, fingers vibrating. As he dropped to the balcony floor in battle-crouch, the men slumped around him.

He had seen the man with the blaster pistol before. It was the Mayor of Newyork.

Lane stood for a moment in the midst of the sprawled men, the shrieks of the crowd floating up to him. Then he raised his glove to his lips. He made contact with Manhattan Armory.

"Colonel Klett, sir. You said if we captured the city government we might have a chance. Well, I captured the city government. What do we do with it now?"

* * * * *

Lane was uncomfortable in his dress uniform. First there had been a ceremony in Tammany Square inaugurating Newyork's new Military Protectorate, and honoring Trooper Lane. Now there was a formal dinner. Colonel Klett and Gerri Kin sat on either side of Lane.

Klett said, "Call me an opportunist if you like, Miss Kin, my government will be stable, and Mars can negotiate with it." He was a lean, sharp-featured man with deep grooves in his face, and gray hair.

Gerri shook her head. "Recognition for a new government takes time. I'm going back to Mars, and I think they'll send another ambassador next time. Nothing personal—I just don't like it here."

Lane said, "I'm going to Mars, too."

"Did she ask you to?" demanded Klett.

Lane shook his head. "She's got too much class for me. But I like what she told me about Mars. It's healthy, like."

Klett frowned. "If I thought there was a gram of talent involved in your capture of the Mayor, Lane, I'd never release you from duty. But I know better. You beat that analogue computer by sheer stupidity—by disregarding your cybrain."

Lane said, "It wasn't so stupid if it worked."

"That's what bothers me. It calls for a revision in our tactics. We've got a way of beating those big computers now, should anyone use them against us."

"I just didn't want her to be hurt."

"Exactly. The computer could outguess a machine, like your cybrain. But you introduced a totally unpredictable factor—human emotion. Which proves what I, as a military man, have always maintained—that the deadliest weapon in man's arsenal is still, and will always be, the individual soldier."

"What you just said there, sir," said Lane. "That's why I'm leaving Newyork."

"What do you mean?" asked Colonel Klett.

"I'm tired of being a weapon, sir. I want to be a human being." END
Hellman plucked the last radish out of the can with a pair of dividers. He held it up for Casker to admire, then laid it carefully on the workbench beside the razor.

"Hell of a meal for two grown men," Casker said, flopping down in one of the ship's padded crash chairs.

"If you'd like to give up your share--" Hellman started to suggest.

Casker shook his head quickly. Hellman smiled, picked up the razor and examined its edge critically.

"Don't make a production out of it," Casker said, glancing at the ship's instruments. They were approaching a red dwarf, the only planet-bearing sun in the vicinity. "We want to be through with supper before we get much closer."

Hellman made a practice incision in the radish, squinting along the top of the razor. Casker bent closer, his mouth open. Hellman poised the razor delicately and cut the radish cleanly in half.

"Will you say grace?" Hellman asked.

Casker growled something and popped a half in his mouth. Hellman chewed more slowly. The sharp taste seemed to explode along his disused tastebuds.

"Not much bulk value," Hellman said.

Casker didn't answer. He was busily studying the red dwarf.

As he swallowed the last of his radish, Hellman stifled a sigh. Their last meal had been three days ago ... if two biscuits and a cup of water could be called a meal. This radish, now resting in the vast emptiness of their stomachs, was the last gram of food on board ship.

"Two planets," Casker said. "One's burned to a crisp."

"Then we'll land on the other."

Casker nodded and punched a deceleration spiral into the ship's tape.

Hellman found himself wondering for the hundredth time where the fault had been. Could he have made out the food requisitions wrong, when they took on supplies at Calao station? After all, he had been devoting most of his attention to the mining equipment. Or had the ground crew just forgotten to load those last precious cases?

He drew his belt in to the fourth new notch he had punched.

Speculation was useless. Whatever the reason, they were in a jam. Ironically enough, they had more than enough fuel to take them back to Calao. But they would be a pair of singularly emaciated corpses by the time the ship reached there.

"We're coming in now," Casker said.

And to make matters worse, this unexplored region of space had few suns and fewer planets. Perhaps there was a slight possibility of replenishing their water supply, but the odds were enormous against finding anything they could eat.

"Look at that place," Casker growled.

Hellman shook himself out of his reverie.

The planet was like a round gray-brown porcupine. The spines of a million needle-sharp mountains glittered in the red dwarf's feeble light. And as they spiraled lower, circling the planet, the pointed mountains seemed to stretch out to meet them.

"It can't be all mountains," Hellman said.

"It's not."

Sure enough, there were oceans and lakes, out of which thrust jagged island-mountains. But no sign of level land, no hint of civilization, or even animal life.

"At least it's got an oxygen atmosphere," Casker said.

Their deceleration spiral swept them around the planet, cutting lower into the atmosphere, braking against it. And still there was nothing but mountains and lakes and oceans and more mountains.


"Stupid place to build," Casker muttered.
The building was doughnut-shaped, and fitted nicely over the top of the mountain. There was a wide, level lip around it, which Casker scorched as he landed the ship.

From the air, the building had merely seemed big. On the ground, it was enormous. Hellman and Casker walked up to it slowly. Hellman had his burner ready, but there was no sign of life.

"This planet must be abandoned," Hellman said almost in a whisper.
"Anyone in his right mind would abandon this place," Casker said. "There're enough good planets around, without anyone trying to live on a needle point."

They reached the door. Hellman tried to open it and found it locked. He looked back at the spectacular display of mountains.

"You know," he said, "when this planet was still in a molten state, it must have been affected by several gigantic moons that are now broken up. The strains, external and internal, wrenched it into its present spined appearance and--"

"Come off it," Casker said ungraciously. "You were a librarian before you decided to get rich on uranium."

Hellman shrugged his shoulders and burned a hole in the doorlock. They waited.

The only sound on the mountain top was the growling of their stomachs.

They entered.

The tremendous wedge-shaped room was evidently a warehouse of sorts. Goods were piled to the ceiling, scattered over the floor, stacked haphazardly against the walls. There were boxes and containers of all sizes and shapes, some big enough to hold an elephant, others the size of thimbles.

Near the door was a dusty pile of books. Immediately, Hellman bent down to examine them.

"Must be food somewhere in here," Casker said, his face lighting up for the first time in a week. He started to open the nearest box.

"This is interesting," Hellman said, discarding all the books except one.
"Let's eat first," Casker said, ripping the top off the box. Inside was a brownish dust. Casker looked at it, sniffed, and made a face.

"Very interesting indeed," Hellman said, leafing through the book.

Casker opened a small can, which contained a glittering green slime. He closed it and opened another. It contained a dull orange slime.

"Hmm," Hellman said, still reading.

"Helman! Will you kindly drop that book and help me find some food?"

Casker opened a kidney-shaped can and lifted out a soft purple stick. It hardened quickly and crumpled to dust as he tried to smell it. He scooped up a handful of the dust and brought it to his mouth.

"That might be extract of strychnine," Hellman said casually.

Casker abruptly dropped the dust and wiped his hands.

"After all," Hellman pointed out, "granted that this is a warehouse--a cache, if you wish--we don't know what the late inhabitants considered good fare. Paris green salad, perhaps, with sulphuric acid as dressing."

"All right," Casker said, "but we gotta eat. What're you going to do about all this?" He gestured at the hundreds of boxes, cans and bottles.

"The thing to do," Hellman said briskly, "is to make a qualitative analysis on four or five samples. We could start out with a simple titration, sublimate the chief ingredient, see if it forms a precipitate, work out its molecular makeup from--"

"Hellman, you don't know what you're talking about. You're a librarian, remember? And I'm a correspondence school pilot. We don't know anything about titrations and sublimations."

"I know," Hellman said, "but we should. It's the right way to go about it."

"Sure. In the meantime, though, just until a chemist drops in, what'll we do?"

"This might help us," Hellman said, holding up the book. "Do you know what it is?"

"No," Casker said, keeping a tight grip on his patience.

"It's a pocket dictionary and guide to the Helg language."

"Helg?"

"The planet we're on. The symbols match up with those on the boxes."

Casker raised an eyebrow. "Never heard of Helg."
"I don't believe the planet has ever had any contact with Earth," Hellman said. "This dictionary isn't Helg-English. It's Helg-Aloombrigian."

Casker remembered that Aloombrigia was the home planet of a small, adventurous reptilian race, out near the center of the Galaxy.

"How come you can read Aloombrigian?" Casker asked.

"Oh, being a librarian isn't a completely useless profession," Hellman said modestly. "In my spare time--"

"Yeah. Now how about--"

"Do you know," Hellman said, "the Aloombrigians probably helped the Helgans leave their planet and find another. They sell services like that. In which case, this building very likely is a food cache!"

"Suppose you start translating," Casker suggested wearily, "and maybe find us something to eat."

They opened boxes until they found a likely-looking substance. Laboriously, Hellman translated the symbols on it.

"Got it," he said. "It reads:--'USE SNIFFNERS--THE BETTER ABRASIVE.'"

"Doesn't sound edible," Casker said.

"I'm afraid not."

They found another, which read: VIGROOM! FILL ALL YOUR STOMACHS, AND FILL THEM RIGHT!

"What kind of animals do you suppose these Helgans were?" Casker asked.

Hellman shrugged his shoulders.

The next label took almost fifteen minutes to translate. It read: ARGOSEL MAKES YOUR THUDRA ALL TIZZY. CONTAINS THIRTY ARPS OF RAMSTAT PULZ, FOR SHELL LUBRICATION.

"There must be something here we can eat," Casker said with a note of desperation.

"I hope so," Hellman replied.

* * * * *

At the end of two hours, they were no closer. They had translated dozens of titles and sniffed so many substances that their olfactory senses had given up in disgust.

"Let's talk this over," Hellman said, sitting on a box marked: VORMITISH--GOOD AS IT SOUNDS!

"Sure," Casker said, sprawling out on the floor. "Talk."

"If we could deduce what kind of creatures inhabited this planet, we'd know what kind of food they ate, and whether it's likely to be edible for us."

"All we do know is that they wrote a lot of lousy advertising copy."

Hellman ignored that. "What kind of intelligent beings would evolve on a planet that is all mountains?"

"Stupid ones!" Casker said.

That was no help. But Hellman found that he couldn't draw any inferences from the mountains. It didn't tell him if the late Helgans ate silicates or proteins or iodine-base foods or anything.

"Now look," Hellman said, "we'll have to work this out by pure logic--Are you listening to me?"

"Sure," Casker said.

"Okay. There's an old proverb that covers our situation perfectly: 'One man's meat is another man's poison.'"

"Yeah," Casker said. He was positive his stomach had shrunk to approximately the size of a marble.

"We can assume, first, that their meat is our meat."

Casker wrenched himself away from a vision of five juicy roast beefs dancing tantalizingly before him. "What if their meat is our poison? What then?"

"Then," Hellman said, "we will assume that their poison is our meat."

"And what happens if their meat and their poison are our poison?"

"We starve."

"All right," Casker said, standing up. "Which assumption do we start with?"

"Well, there's no sense in asking for trouble. This is an oxygen planet, if that means anything. Let's assume that we can eat some basic food of theirs. If we can't we'll start on their poisons."

"If we live that long," Casker said.

Hellman began to translate labels. They discarded such brands as ANDROGYNITES' DELIGHT AND VERBELL--FOR LONGER, CURLIER, MORE SENSITIVE ANTENNAE, until they found a small gray box, about six inches by three by three. It was called VALKORIN'S UNIVERSAL TASTE TREAT, FOR ALL DIGESTIVE CAPACITIES.

"This looks as good as any," Hellman said. He opened the box.

Casker leaned over and sniffed. "No odor."

* * * * *

Within the box they found a rectangular, rubbery red block. It quivered slightly, like jelly.
"Bite into it," Casker said.
"Me?" Hellman asked. "Why not you?"
"You picked it."
"I prefer just looking at it," Hellman said with dignity. "I'm not too hungry."
"I'm not either," Casker said.
They sat on the floor and stared at the jellylike block. After ten minutes, Hellman yawned, leaned back and closed his eyes.
"All right, coward," Casker said bitterly. "I'll try it. Just remember, though, if I'm poisoned, you'll never get off this planet. You don't know how to pilot."
"Just take a little bite, then," Hellman advised.
Casker leaned over and stared at the block. Then he prodded it with his thumb.
The rubbery red block giggled.
"Did you hear that?" Casker yelped, leaping back.
"I didn't hear anything," Hellman said, his hands shaking. "Go ahead."
Casker prodded the block again. It giggled louder, this time with a disgusting little simper.
"Okay," Casker said, "what do we try next?"
"Next? What's wrong with this?"
"I don't eat anything that giggles," Casker stated firmly.
"Now listen to me," Hellman said. "The creatures who manufactured this might have been trying to create an esthetic sound as well as a pleasant shape and color. That giggle is probably only for the amusement of the eater."
"Then bite into it yourself," Casker offered.
Hellman glared at him, but made no move toward the rubbery block. Finally he said, "Let's move it out of the way."
They pushed the block over to a corner. It lay there giggling softly to itself.
"Now what?" Casker said.
Hellman looked around at the jumbled stacks of incomprehensible alien goods. He noticed a door on either side of the room.
"Let's have a look in the other sections," he suggested.
Casker shrugged his shoulders apathetically.
Slowly they trudged to the door in the left wall. It was locked and Hellman burned it open with the ship's burner.
It was a wedge-shaped room, piled with incomprehensible alien goods.
The hike back across the room seemed like miles, but they made it only slightly out of wind. Hellman blew out the lock and they looked in.
It was a wedge-shaped room, piled with incomprehensible alien goods.
"All the same," Casker said sadly, and closed the door.
"Evidently there's a series of these rooms going completely around the building," Hellman said. "I wonder if we should explore them."
Casker calculated the distance around the building, compared it with his remaining strength, and sat down heavily on a long gray object.
"Why bother?" he asked.
* * * * *
Hellman tried to collect his thoughts. Certainly he should be able to find a key of some sort, a clue that would tell him what they could eat. But where was it?
He examined the object Casker was sitting on. It was about the size and shape of a large coffin, with a shallow depression on top. It was made of a hard, corrugated substance.
"What do you suppose this is?" Hellman asked.
"Does it matter?"
Hellman glanced at the symbols painted on the side of the object, then looked them up in his dictionary.
"Fascinating," he murmured, after a while.
"Is it something to eat?" Casker asked, with a faint glimmering of hope.
"No, You are sitting on something called THE MOROG CUSTOM SUPER TRANSPORT FOR THE DISCRIMINATING HELGAN WHO DESIRES THE BEST IN VERTICAL TRANSPORTATION. It's a vehicle!"
"Oh," Casker said dully.
"This is important! Look at it! How does it work?"
Casker wearily climbed off the Morog Custom Super Transport and looked it over carefully. He traced four
almost invisible separations on its four corners. "Retractable wheels, probably, but I don't see--"

Hellman read on. "It says to give it three amphus of high-gain Integor fuel, then a van of Tonder lubrication, and not to run it over three thousand Ruls for the first fifty mungus."

"Let's find something to eat," Casker said.

"Don't you see how important this is?" Hellman asked. "This could solve our problem. If we could deduce the alien logic inherent in constructing this vehicle, we might know the Helgan thought pattern. This, in turn, would give us an insight into their nervous systems, which would imply their biochemical makeup."

Casker stood still, trying to decide whether he had enough strength left to strangle Hellman.

"For example," Hellman said, "what kind of vehicle would be used in a place like this? Not one with wheels, since everything is up and down. Anti-gravity? Perhaps, but what kind of anti-gravity? And why did the inhabitants devise a boxlike form instead--"

Casker decided sadly that he didn't have enough strength to strangle Hellman, no matter how pleasant it might be. Very quietly, he said, "Kindly stop making like a scientist. Let's see if there isn't something we can gulp down."

"All right," Hellman said sulkily.

* * * * *

Casker watched his partner wander off among the cans, bottles and cases. He wondered vaguely where Hellman got the energy, and decided that he was just too cerebral to know when he was starving.

"Here's something," Hellman called out, standing in front of a large yellow vat.

"What does it say?" Casker asked.

"Little bit hard to translate. But rendered freely, it reads: MORISHILLE'S VOOZY, WITH LACTO-ECTO ADDED FOR A NEW TASTE SENSATION. EVERYONE DRINKS VOOZY. GOOD BEFORE AND AFTER MEALS, NO UNPLEASANT AFTER-EFFECTS. GOOD FOR CHILDREN! THE DRINK OF THE UNIVERSE!"

"That sounds good," Casker admitted, thinking that Hellman might not be so stupid after all.

"This should tell us once and for all if their meat is our meat," Hellman said. "This Voozy seems to be the closest thing to a universal drink I've found yet."

"Maybe," Casker said hopefully, "maybe it's just plain water!"

"We'll see." Hellman pried open the lid with the edge of the burner.

Within the vat was a crystal-clear liquid.

"No odor," Casker said, bending over the vat.

The crystal liquid lifted to meet him.

Casker retreated so rapidly that he fell over a box. Hellman helped him to his feet, and they approached the vat again. As they came near, the liquid lifted itself three feet into the air and moved toward them.

"What've you done now?" Casker asked, moving back carefully. The liquid flowed slowly over the side of the vat. It began to flow toward him.

"Hellman!" Casker shrieked.

Hellman was standing to one side, perspiration pouring down his face, reading his dictionary with a preoccupied frown.

"Guess I bumbled the translation," he said.

"Do something!" Casker shouted. The liquid was trying to back him into a corner.

"Nothing I can do," Hellman said, reading on. "Ah, here's the error. It doesn't say 'Everyone drinks Voozy.' Wrong subject. 'Voozy drinks everyone.' That tells us something! The Helgans must have soaked liquid in through their pores. Naturally, they would prefer to be drunk, instead of to drink."

Casker tried to dodge around the liquid, but it cut him off with a merry gurgle. Desperately he picked up a small bale and threw it at the Voozy. The Voozy caught the bale and drank it. Then it discarded that and turned back to Casker.

Hellman tossed another box. The Voozy drank this one and a third and fourth that Casker threw in. Then, apparently exhausted, it flowed back into its vat.

Casker clapped down the lid and sat on it, trembling violently.

"Not so good," Hellman said. "We've been taking it for granted that the Helgans had eating habits like us. But, of course, it doesn't necessarily--"

"No, it doesn't. No, sir, it certainly doesn't. I guess we can see that it doesn't. Anyone can see that it doesn't--"

"Stop that," Hellman ordered sternly. "We've no time for hysteria."

"Sorry." Casker slowly moved away from the Voozy vat.

"I guess we'll have to assume that their meat is our poison," Hellman said thoughtfully. "So now we'll see if their poison is our meat."

Casker didn't say anything. He was wondering what would have happened if the Voozy had drunk him.
In the corner, the rubbery block was still giggling to itself.

"Now here's a likely-looking poison," Hellman said, half an hour later. Casker had recovered completely, except for an occasional twitch of the lips. "What does it say?" he asked.

Hellman rolled a tiny tube in the palm of his hand. "It's called Pvastkin's Plugger. The label reads: WARNING! HIGHLY DANGEROUS! PVASTKIN'S PLUGGER IS DESIGNED TO FILL HOLES OR CRACKS OF NOT MORE THAN TWO CUBIC ViMs. HOWEVER--THE PLUGGER IS NOT TO BE EATEN UNDER ANY CIRCUMSTANCES. THE ACTIVE INGREDIENT, RAMOTOL, WHICH MAKES PVASTKIN'S SO EXCELLENT A PLUGGER RENDERS IT HIGHLY DANGEROUS WHEN TAKEN INTERNALLY."

"Sounds great," Casker said. "It'll probably blow us sky-high."

"Do you have any other suggestions?" Hellman asked.

Casker thought for a moment. The food of Helg was obviously unpalatable for humans. So perhaps was their poison ... but wasn't starvation better than this sort of thing?

After a moment's communion with his stomach, he decided that starvation was not better. "Go ahead," he said.

Hellman slipped the burner under his arm and unscrewed the top of the little bottle. He shook it. Nothing happened. "It's got a seal," Casker pointed out.

Hellman punctured the seal with his fingernail and set the bottle on the floor. An evil-smelling green froth began to bubble out.

"Yeast, perhaps," he said, gripping the burner tightly.

"Come, come. Faint heart never filled an empty stomach."

"I'm not holding you back," Hellman said.

The glob swelled to the size of a man's head. "How long is that supposed to go on?" Casker asked.

"Well," Hellman said, "it's advertised as a Plugger. I suppose that's what it does--expands to plug up holes."

"Sure. But how much?"

"Unfortunately, I don't know how much two cubic vims are. But it can't go on much--"

Belatedly, they noticed that the Plugger had filled almost a quarter of the room and was showing no signs of stopping.

"We should have believed the label!" Casker yelled to him, across the spreading glob. "It is dangerous!"

As the Plugger produced more surface, it began to accelerate in its growth. A sticky edge touched Hellman, and he jumped back.

"Watch out!"

He couldn't reach Casker, on the other side of the gigantic sphere of blob. Hellman tried to run around, but the Plugger had spread, cutting the room in half. It began to swell toward the walls.

"Run for it!" Hellman yelled, and rushed to the door behind him.

He flung it open just as the expanding glob reached him. On the other side of the room, he heard a door slam shut. Hellman didn't wait any longer. He sprinted through and slammed the door behind him.

He stood for a moment, panting, the burner in his hand. He hadn't realized how weak he was. That sprint had cut his reserves of energy dangerously close to the collapsing point. At least Casker had made it, too, though.

But he was still in trouble.

The Plugger poured merrily through the blasted lock, into the room. Hellman tried a practice shot on it, but the Plugger was evidently impervious ... as, he realized, a good plugger should be.

It was showing no signs of fatigue.

Hellman hurried to the far wall. The door was locked, as the others had been, so he burned out the lock and went through.

How far could the glob expand? How much was two cubic vims? Two cubic miles, perhaps? For all he knew, the Plugger was used to repair faults in the crusts of planets.

In the next room, Hellman stopped to catch his breath. He remembered that the building was circular. He would burn his way through the remaining doors and join Casker. They would burn their way outside and....

Casker didn't have a burner!

Hellman turned white with shock. Casker had made it into the room on the right, because they had burned it
open earlier. The Plugger was undoubtedly oozing into that room, through the shattered lock ... and Casker couldn't get out! The Plugger was on his left, a locked door on his right!
Rallying his remaining strength, Hellman began to run. Boxes seemed to get in his way purposefully, tripping him, slowing him down. He blasted the next door and hurried on to the next. And the next. And the next.
The Plugger couldn't expand completely into Casker's room!
Or could it?
The wedge-shaped rooms, each a segment of a circle, seemed to stretch before him forever, a jumbled montage of locked doors, alien goods, more doors, more goods. Hellman fell over a crate, got to his feet and fell again. He had reached the limit of his strength, and passed it. But Casker was his friend.
Besides, without a pilot, he'd never get off the place.
Hellman struggled through two more rooms on trembling legs and then collapsed in front of a third.
"Is that you, Hellman?" he heard Casker ask, from the other side of the door.
"You all right?" Hellman managed to gasp.
"Haven't much room in here," Casker said, "but the Plugger's stopped growing. Hellman, get me out of here!"

* * * * *

Hellman lay on the floor panting. "Moment," he said.
"Moment, hell!" Casker shouted. "Get me out. I've found water!"
"What? How?"
"Get me out of here!"
Hellman tried to stand up, but his legs weren't cooperating. "What happened?" he asked.
"When I saw that glob filling the room, I figured I'd try to start up the Super Custom Transport. Thought maybe it could knock down the door and get me out. So I pumped it full of high-gain Integor fuel."
"Yes?" Hellman said, still trying to get his legs under control.
"That Super Custom Transport is an animal, Hellman! And the Integor fuel is water! Now get me out!"

Hellman lay back with a contented sigh. If he had had a little more time, he would have worked out the whole thing himself, by pure logic. But it was all very apparent now. The most efficient machine to go over those vertical, razor-sharp mountains would be an animal, probably with retractable suckers. It was kept in hibernation between trips; and if it drank water, the other products designed for it would be palatable, too. Of course they still didn't know much about the late inhabitants, but undoubtedly....
"Burn down that door!" Casker shrieked, his voice breaking.
Hellman was pondering the irony of it all. If one man's meat--and his poison--are your poison, then try eating something else. So simple, really.
But there was one thing that still bothered him.
"How did you know it was an Earth-type animal?" he asked.
"Its breath, stupid! It inhales and exhales and smells as if it's eaten onions!" There was a sound of cans falling and bottles shattering. "Now hurry!"
"What's wrong?" Hellman asked, finally getting to his feet and poising the burner.
"The Custom Super Transport. It's got me cornered behind a pile of cases. Hellman, it seems to think that I'm its meat!"

Broiled with the burner--well done for Hellman, medium rare for Casker--it was their meat, with enough left over for the trip back to Calao.
Prologue

The Lexman Spacedrive was only the second most important theoretical accomplishment of the exciting years at the dawn of the Space Age, yet it changed all human history and forever altered the pattern of sociocultural development on Earth.

Yet it was only the second most important discovery.

The Cavour Hyperdrive unquestionably would have held first rank in any historical assessment, had the Cavour Hyperdrive ever reached practical use. The Lexman Spacedrive allows mankind to reach Alpha Centauri, the closest star with habitable planets, in approximately four and a half years. The Cavour Hyperdrive—if it ever really existed—would have brought Alpha C within virtual instantaneous access.

But James Hudson Cavour had been one of those tragic men whose personalities negate the value of their work. A solitary, cantankerous, opinionated individual—a crank, in short—he withdrew from humanity to develop the hyperspace drive, announcing at periodic intervals that he was approaching success.

A final enigmatic bulletin in the year 2570 indicated to some that Cavour had achieved his goal or was on the verge of achieving it; others, less sympathetic, interpreted his last message as a madman’s wild boast. It made little difference which interpretation was accepted. James Hudson Cavour was never heard from again.

A hard core of passionate believers insisted that he had developed a faster-than-light drive, that he had succeeded in giving mankind an instantaneous approach to the stars. But they, like Cavour himself, were laughed down, and the stars remained distant.

Distant—but not unreachable. The Lexman Spacedrive saw to that.

Lexman and his associates had developed their ionic drive in 2337, after decades of research. It permitted man to approach, but not to exceed, the theoretical limiting velocity of the universe: the speed of light.

Ships powered by the Lexman Spacedrive could travel at speeds just slightly less than the top velocity of 186,000 miles per second. For the first time, the stars were within man’s grasp.

The trip was slow. Even at such fantastic velocities as the Lexman Spacedrive allowed, it took nine years for a ship to reach even the nearest of stars, stop, and return; a distant star such as Bellatrix required a journey lasting two hundred fifteen years each way. But even this was an improvement over the relatively crude spacedrives then in use, which made a journey from Earth to Pluto last for many months and one to the stars almost unthinkable.

The Lexman Spacedrive worked many changes. It gave man the stars. It brought strange creatures to Earth, strange products, strange languages.

But one necessary factor was involved in slower-than-light interstellar travel, one which the Cavour drive would have averted: the Fitzgerald Contraction. Time aboard the great starships that lanced through the void was contracted; the nine-year trip to Alpha Centauri and back seemed to last only six weeks to the men on the ship, thanks to the strange mathematical effects of interstellar travel at high—but not infinite—speeds.

The results were curious, and in some cases tragic. A crew that had aged only six weeks would return to find that Earth had grown nine years older. Customs had changed; new slang words made language unintelligible.

The inevitable development was the rise of a guild of Spacers, men who spent their lives flashing between the suns of the universe and who had little or nothing to do with the planet-bound Earthers left behind. Spacer and Earther, held apart forever by the inexorable mathematics of the Fitzgerald Contraction, came to regard each other with a bitter sort of distaste.

The centuries passed—and the changes worked by the coming of the Lexman Spacedrive became more pronounced. Only a faster-than-light spacedrive could break down the ever-widening gulf between Earther and Spacer—and the faster-than-light drive remained as unattainable a dream as it had been in the days of James Hudson Cavour.

—Sociocultural Dynamics Leonid Hallman London, 3876

Chapter One

The sound of the morning alarm rang out, four loud hard clear gong-clangs, and all over the great starship Valhalla the men of the Crew rolled out of their bunks to begin another day. The great ship had travelled silently through the endless night of space while they slept, bringing them closer and closer to the mother world, Earth. The Valhalla was on the return leg of a journey to Alpha Centauri.

But one man aboard the starship had not waited for the morning alarm. For Alan Donnell the day had begun
several hours before. Restless, unable to sleep, he had quietly slipped from his cabin in the fore section, where the unmarried Crewmen lived, and had headed forward to the main viewscreen, in order to stare at the green planet growing steadily larger just ahead.

He stood with his arms folded, a tall red-headed figure, long-legged, a little on the thin side. Today was his seventeenth birthday.

Alan adjusted the fine controls on the viewscreen and brought Earth into sharper focus. He tried to pick out the continents on the planet below, struggling to remember his old history lessons. Tutor Henrich would not be proud of him, he thought.

That's South America down there, he decided, after rejecting the notion that it might be Africa. They had pretty much the same shape, and it was so hard to remember what Earth's continents looked like when there were so many other worlds. But that's South America. And so that's North America just above it. The place where I was born.

Then the 0800 alarm went off, the four commanding gongs that Alan always heard as It's! Time! Wake! Up! The starship began to stir into life. As Alan drew out his Tally and prepared to click off the start of a new day, he felt a strong hand firmly grasp his shoulder.

"Morning, son."

Alan turned from the viewscreen. He saw the tall, gaunt figure of his father standing behind him. His father--and the Valhalla's captain.

"Good rising, Captain."

Captain Donnell eyed him curiously. "You've been up a while, Alan. I can tell. Is there something wrong?"

"Just not sleepy, that's all," Alan said.

"You look troubled about something."

"No, Dad--I'm not," he lied. To cover his confusion he turned his attention to the little plastic gadget he held in his hand--the Tally. He punched the stud; the register whirred and came to life.

He watched as the reading changed. The black-on-yellow dials slid forward from Year 16 Day 365 to Year 17 Day 1.

As the numbers dropped into place his father said, "It's your birthday, is it? Let it be a happy one!"

"Thanks, Dad. You know, it'll feel fine to have a birthday on Earth!"

The Captain nodded. "It's always good to come home, even if we'll have to leave again soon. And this will be the first time you've celebrated your birthday on your native world in--three hundred years, Alan."

Grinning, Alan thought, Three hundred? No, not really. Out loud he said, "You know that's not right, Dad. Not three hundred years. Just seventeen." He looked out at the slowly-spinning green globe of Earth.

"When on Earth, do as the Earthers do," the Captain said. "That's an old proverb of that planet out there. The main vault of the computer files says you were born in 3576, unless I forget. And if you ask any Earther what year this is he'll tell you it's 3876. 3576-3876--that's three hundred years, no?" His eyes twinkled.

"Stop playing games with me, Dad." Alan held forth his Tally. "It doesn't matter what the computer files say. Right here it says Year 17 Day 1, and that's what I'm going by. Who cares what year it is on Earth? This is my world!"

"I know, Alan."

Together they moved away from the viewscreen; it was time for breakfast, and the second gongs were sounding. "I'm just teasing, son. But that's the sort of thing you'll be up against if you leave the Starmen's Enclave--the way your brother did."

Alan frowned and his stomach went cold. He wished the unpleasant topic of his brother had not come up. "You think there's any chance Steve will come back, this time down? Will we be in port long enough for him to find us?"

Captain Donnell's face clouded. "We're going to be on Earth for almost a week," he said in a suddenly harsh voice. "That's ample time for Steve to rejoin us, if he cares to. But I don't imagine he'll care to. And I don't know if I want very much to have him back."

He paused outside the handsomely-panelled door of his private cabin, one hand on the thumb-plate that controlled entrance. His lips were set in a tight thin line. "And remember this, Alan," he said. "Steve's not your twin brother any more. You're only seventeen, and he's almost twenty-six. He'll never be your twin again."

With sudden warmth the captain squeezed his son's arm. "Well, better get up there to eat, Alan. This is going to be a busy day for all of us."

He turned and went into the cabin.

Alan moved along the wide corridor of the great ship toward the mess hall in Section C, thinking about his brother. It had been only about six weeks before, when the Valhalla had made its last previous stop on Earth, that Steve had decided to jump ship.

The Valhalla's schedule had called for them to spend two days on Earth and then leave for Alpha Centauri with
a load of colonists for Alpha C IV. A starship's time is always scheduled far in advance, with bookings planned sometimes for decades Earthtime by the Galactic Trade Commission.

When blastoff time came for the Valhalla, Steve had not reported back from the Starmen's Enclave where all Spacers lived during in-port stays.

Alan's memories of the scene were still sharp. Captain Donnell had been conducting check-off, making sure all members of the Crew had reported back and were aboard. This was a vital procedure; in case anyone were accidentally left behind, it would mean permanent separation from his friends and family.

He had reached the name Donnell, Steve. No answer came. Captain Donnell called his name a second time, then a third. A tense silence prevailed in the Common Room of the starship, where the Crew was assembled.

Finally Alan made himself break the angry silence. "He's not here, Dad. And he's not coming back," he said in a hesitant voice. And then he had had to explain to his father the whole story of his unruly, aggressive twin brother's plan to jump ship—and how Steve had tried to persuade him to leave the Valhalla too.

Steve had been weary of the endless shuttling from star to star, of forever ferrying colonists from one place to another without ever standing on the solid ground of a planet yourself for more than a few days here, a week there.

Alan had felt tired of it too—they all did, at some time or another—but he did not share his twin's rebellious nature, and he had not gone over the hill with Steve.

Alan remembered his father's hard, grim expression as he had been told the story. Captain Donnell's reaction had been curt, immediate, and thoroughly typical: he had nodded, closed the roll book, and turned to Art Kandin, the Valhalla's First Officer and the Captain's second-in-command.

"Remove Crewman Donnell from the roster," he had snapped. "All other hands are on board. Prepare for blastoff."

Within the hour the flaming jets of the Valhalla's planetary drive had lifted the great ship from Earth. They had left immediately for Alpha Centauri, four and a half light-years away. The round trip had taken the Valhalla just six weeks.

During those six weeks, better than nine years had passed on Earth.

Alan Donnell was seventeen years old.

His twin brother Steve was now twenty-six.

* * * * *

"Happy rising, Alan," called a high, sharp voice as he headed past the blue-painted handholds of Gravity Deck 12 on his way toward the mess hall.

Startled, he glanced up, and then snorted in disgust as he saw who had hailed him. It was Judy Collier, a thin, stringy-haired girl of about fourteen whose family had joined the Crew some five ship-years back. The Colliers were still virtual newcomers to the tight group on the ship—the family units tended to remain solid and self-contained—but they had managed to fit in pretty well by now.

"Going to eat?" she asked.

"Right enough," said Alan, continuing to walk down the plastifoam-lined corridor. She tagged along a step or two behind him.

"Today's your birthday, isn't it?"

"Right enough," Alan said again, more abruptly. He felt a sudden twinge of annoyance; Judy had somehow developed a silly crush on him during the last voyage to Alpha C, and since then she had contrived to follow him around wherever he went, bombarding him with questions. She was a silly adolescent girl, Alan thought scornfully.

"Happy birthday," she said, giggling. "Can I kiss you?"

"No," returned Alan flatly. "You better watch out or I'm going to get Rat after you."

"Oh, I'm not afraid of that little beast," she retorted. "One of these days I'll chuck him down the disposal hatch like the little vermin he--ouch!"

"You watch out who you're calling vermin," said a thin, dry, barely-audible voice from the floor.

Alan glanced down and saw Rat, his pet and companion, squatting near Judy and flicking his beady little red eyes mischievously in the direction of the girl's bare skinny ankle.

"He bit me," Judy complained, gesturing as if she were going to step on the little creature. But Rat nimbly skittered to one side, leaped to the trousers of Alan's uniform, and from there clambered to his usual perch aboard his master's shoulder.

Judy gestured at him in frustration, stamped her foot, and dashed away into the mess hall. Chuckling, Alan followed and found his seat at the bench assigned to Crewmen of his status quotient.

"Thanks, fellow," he said softly to the little being on his shoulder. "That's kid's getting to be pretty annoying."

"I figured as much," Rat said in his chittering birdlike voice. "And I don't like the way she's been looking at me. She's just the kind of individual who would dump me in a disposal hatch."
"Don't worry about it," Alan said. "If she pulls anything of the sort I'll personally see to it that she goes out right after you."

"That does me a lot of good," Rat said glumly as Alan's breakfast came rolling toward him on the plastic conveyor belt from the kitchen.

Alan laughed and reached avidly for the steaming tray of food. He poured a little of his synthorange juice into a tiny pan for Rat, and fell to.

Rat was a native of Bellatrix VII, an Earth-size windswept world that orbited the bright star in the Orion constellation. He was a member of one of the three intelligent races that shared the planet with a small colony of Earthmen.

The Valhalla had made the long trip to Bellatrix, 215 light-years from Earth, shortly before Alan's birth. Captain Donnell had won the friendship of the little creature and had brought him back to the ship when time came for the Valhalla to return to Earth for its next assignment.

Rat had been the Captain's pet, and he had given Alan the small animal on his tenth birthday. Rat had never gotten along well with Steve, and more than once he had been the cause of jealous conflicts between Alan and his twin.

Rat was well named; he looked like nothing so much as a small bluish-purple rodent, with wise, beady little eyes and a scaly curling tail. But he spoke Terran clearly and well, and in every respect he was an intelligent, loyal, and likable creature.

They ate in silence. Alan was halfway through his bowl of protein mix when Art Kandin dropped down onto his bench facing him. The Valhalla's First Officer was a big pudgy-faced man who had the difficult job of translating the concise, sometimes almost cryptic commands of Alan's father into the actions that kept the great starship going.

"Good rising, Alan. And happy birthday."

"Thanks, Art. But how come you're loafing now? Seems to me you'd be busy as a Martian dustdigger today, of all days. Who's setting up the landing orbit, if you're here?"

"Oh, that's all been done," Kandin said lightly. "Your Dad and I were up all last night working out the whole landing procedure." He reached out and took Rat from Alan's shoulder, and began to tickle him with his forefinger.

Rat responded with a playful nip of his sharp little teeth. "I'm taking the morning off," Kandin continued. "You can't imagine how nice it's going to be to sit around doing nothing while everyone else is working, for a change."

"What's the landing hour?"

"Precisely 1753 tonight. It's all been worked out. We actually are in the landing orbit now, though the ship's gimbals keep you from feeling it. We'll touch down tonight and move into the Enclave tomorrow." Kandin eyed Alan with sudden suspicion. "You're planning to stay in the Enclave, aren't you?"

Alan put down his fork with a sharp tinny clang and stared levelly at the First Officer. "That's a direct crack. You're referring to my brother, aren't you?"

"Who wouldn't be?" Kandin asked quietly. "The captain's son jumping ship? You don't know how your father suffered when Steve went over the hill. He kept it all hidden and just didn't say a thing, but I know it hit him hard. The whole affair was a direct reflection on his authority as a parent, of course, and that's why he was so upset. He's a man who isn't used to being crossed."

"I know. He's been on top here so long, with everyone following his orders, that he can't understand how someone could disobey and jump ship--especially his own son."

"I hope you don't have any ideas of----"

Alan clipped off Kandin's sentence before it had gotten fully started. "I don't need advice, Art. I know what's right and wrong. Tell me the truth--did Dad send you to sound me out?"

Kandin flushed and looked down. "I'm sorry, Alan. I didn't mean--well----"

They fell silent. Alan returned his attention to his breakfast, while Kandin stared moodily off into the distance.

"You know," the First Officer said finally, "I've been thinking about Steve. It just struck me that you can't call him your twin any more. That's one of the strangest quirks of star travel that's been recorded yet."

"I thought of that. He's twenty-six, I'm seventeen, and yet we used to be twins. But the Fitzgerald Contraction does funny things."

"That's for sure," Kandin said. "Well, time for me to start relaxing." He clapped Alan on the back, disentangled his long legs from the bench, and was gone.

The Fitzgerald Contraction does funny things, Alan repeated to himself, as he methodically chewed his way through the rest of his meal and got on line to bring the dishes to the yawning hopper that would carry them down to the molecular cleansers. Real funny things.

He tried to picture what Steve looked like now, nine years older. He couldn't.

As velocity approaches that of light, time approaches zero.
That was the key to the universe. Time approaches zero. The crew of a spaceship travelling from Earth to Alpha Centauri at a speed close to that of light would hardly notice the passage of time on the journey.

It was, of course, impossible ever actually to reach the speed of light. But the great starships could come close. And the closer they came, the greater the contraction of time aboard ship.

It was all a matter of relativity. Time is relative to the observer.

Thus travel between the stars was possible. Without the Fitzgerald Contraction, the crew of a spaceship would age five years en route to Alpha C, eight to Sirius, ten to Procyon. More than two centuries would elapse in passage to a far-off star like Bellatrix.

Thanks to the contraction effect, Alpha C was three weeks away, Sirius a month and a half. Even Bellatrix was just a few years' journey distant. Of course, when the crew returned to Earth they found things completely changed; years had passed on Earth, and life had moved on.

Now the Valhalla was back on Earth again for a short stay. On Earth, starmen congregated at the Enclaves, the cities-within-cities that grew up at each spaceport. There, starmen mingled in a society of their own, without attempting to enter the confusing world outside.

Sometimes a Spacer broke away. His ship left him behind, and he became an Earther. Steve Donnell had done that.

The Fitzgerald Contraction does funny things. Alan thought of the brother he had last seen just a few weeks ago, young, smiling, his own identical twin--and wondered what the nine extra years had done to him.

Chapter Two

Alan dumped his breakfast dishes into the hopper and walked briskly out of the mess hall. His destination was the Central Control Room, that long and broad chamber that was the nerve-center of the ship's activities just as the Common Recreation Room was the center of off-duty socializing for the Crew.

He found the big board where the assignments for the day were chalked, and searched down the long lists for his own name.

"You're working with me today, Alan," a quiet voice said.

He turned at the sound of the voice and saw the short, wiry figure of Dan Kelleher, the cargo chief. He frowned. "I guess we'll be crating from now till tonight without a stop," he said unhappily.

Kelleher shook his head. "Wrong. There's really not very much work. But it's going to be cold going. All those chunks of dinosaur meat in the preserving hold are going to get packed up. It won't be fun."

Alan agreed.

He scanned the board, looking down the rows for the list of cargo crew. Sure enough, there was his name: Donnell, Alan, chalked in under the big double C. As an Unspecialized Crewman he was shifted from post to post, filling in wherever he was needed.

"I figure it'll take four hours to get the whole batch crated," Kelleher said. "You can take some time off now, if you want to. You'll be working to make up for it soon enough."

"I won't debate the point. Suppose I report to you at 0900?"

"Suits me."

"In case you need me before then, I'll be in my cabin. Just ring me."

Once back in his cabin, a square cubicle in the beehive of single men's rooms in the big ship's fore section, Alan unslung his pack and took out the dog-eared book he knew so well. He riffled through its pages. The Cavour Theory, it said in worn gold letters on the spine. He had read the volume end-to-end at least a hundred times.

"I still can't see why you're so wild on Cavour," Rat grumbled, looking up from his doll-sized sleeping-cradle in the corner of Alan's cabin. "If you ever do manage to solve Cavour's equations you're just going to put yourself and your family right out of business. Hand me my nibbling-stick, like a good fellow."

"You don't understand," Alan said. "If we can solve Cavour's work and develop the hyperdrive, we won't be handicapped by the Fitzgerald Contraction. What difference does it make in the long run if the Valhalla becomes obsolete? We can always convert it to the new drive. The way I see it, if we could only work out the secret of Cavour's hyperspace drive, we'd----"

"I've heard it all before," Rat said, with a note of boredom in his reedy voice. "Why, with hyperspace drive you'd be able to flit all over the galaxy without suffering the time-lag you experience with regular drive. And then you'd accomplish your pet dream of going everywhere and seeing everything. Ah! Look at the eyes light up! Look at the radiant expression! You get starry-eyed every time you start talking about the hyperdrive!"

"Sure," Rat said drily, switching his long tail from side to side. "Sure he built one. That explains his strange
disappearance. Went out like a snuffed candle, soon as he turned on his drive. Okay, go ahead and build one—if you can. But don’t bother booking passage for me."

"You mean you’d stay behind if I built a hyperspace ship?"

"Sure I would. There was no hesitation in Rat’s voice. “I like this particular space-time continuum very much. I don’t care at all to wind up seventeen dimensions north of here with no way back.”

"You’re just an old stick-in-the-mud." Alan glanced at his wristchron. It read 0852. “Time for me to get to work. Kelleher and I are packing frozen dinosaur today. Want to come along?"

Rat wiggled the tip of his nose in a negative gesture. “Thanks all the same, but the idea doesn’t appeal. It’s nice and warm here. Run along, boy; I’m sleepy.” He curled up in his cradle, wrapped his tail firmly around his body, and closed his eyes.

* * * * *

There was a line waiting at the entrance to the freezer section, and Alan took his place on it. One by one they climbed into the spacesuits which the boy in charge provided, and entered the airlock.

For transporting perishable goods—such as the dinosaur meat brought back from the colony on Alpha C IV to satisfy the heavy demand for that odd-tasting delicacy on Earth—the Valhalla used the most efficient freezing system of all: a compartment which opened out into the vacuum of space. The meat was packed in huge open receptacles which were flooded just before blastoff; before the meat had any chance to spoil, the lock was opened, the air fled into space and the compartment’s heat radiated outward. The water froze solid, preserving the meat. It was just as efficient as building elaborate refrigeration coils, and a good deal simpler.

The job now was to hew the frozen meat out of the receptacles and get it packed in manageable crates for shipping. The job was a difficult one. It called for more muscle than brain.

As soon as all members of the cargo crew were in the airlock, Kelleher swung the hatch closed and threw the lever that opened the other door into the freezer section. Photonic relays clicked; the metal door swung lightly out and they headed through it after Kelleher gave the go-ahead.

Alan and the others set grimly about their work, chopping away at the ice. They fell to vigorously. After a while, they started to get somewhere. Alan grappled with a huge leg of meat while two fellow starmen helped him ease it into a crate. Their hammers pounded down as they nailed the crate together, but not a sound could be heard in the airless vault.

After what seemed to be three or four centuries to Alan, but which was actually only two hours, the job was done. Somehow Alan got himself to the recreation room; he sank down gratefully on a webfoam pneumochair. He snapped on a spool of light music and stretched back, completely exhausted. I don’t ever want to see or taste a dinosaur steak again, he thought. Not ever.

He watched the figures of his crewmates dashing through the ship, each going about some last-minute job that had to be handled before the ship touched down. In a way he was glad he had drawn the assignment he had: it was difficult, gruelingly heavy labor, carried out under nasty circumstances—it was never fun to spend any length of time doing manual labor inside a spacesuit, because the sweat-swabbers and the air-conditioners in the suit were generally always one step behind on the job—but at least the work came to a definite end. Once all the meat was packed, the job was done.

The same couldn’t be said for the unfortunates who swabbed the floors, scraped out the jets, realigned the drive mechanism, or did any other tidying work. Their jobs were never done; they always suffered from the nagging thought that just a little more work might bring the inspection rating up a decimal or two.

Every starship had to undergo a rigorous inspection whenever it touched down on Earth. The Valhalla probably wouldn’t have any difficulties, since it had been gone only nine years Earthtime. But ships making longer voyages often had troubles with the inspectors. Procedure which passed inspection on a ship bound out for Rigel or one of the other far stars might have become a violation in the hundreds of years that would have passed before its return.

Alan wondered if the Valhalla would run into any inspection problems. The schedule called for departure for Procyon in six days, and the ship would as usual be carrying a party of colonists.

The schedule was pretty much of a sacred thing. But Alan had not forgotten his brother Steve. If he only had a few days to get out there and maybe find him—

Well, I’ll see, he thought. He relaxed.

But relaxation was brief. A familiar high-pitched voice cut suddenly into his consciousness. Oh, oh, he thought. Here comes trouble.

"How come you’ve cut jets, spaceman?"

Alan opened one eye and stared balefully at the skinny figure of Judy Collier. "I’ve finished my job, that’s how come. And I’ve been trying to get a little rest. Any objections?"

She held up her hands and looked around the big recreation room nervously. "Okay, don't shoot. Where's that
animal of yours?"

"Rat? Don't worry about him. He's in my cabin, chewing his nibbling-stick. I can assure you it tastes a lot better to him than your bony ankles." Alan yawned deliberately. "Now how about letting me rest?"

She looked wounded. "If you want it that way. I just thought I'd tell you about the doings in the Enclave when we land. There's been a change in the regulations since the last time we were here. But you wouldn't be interested, of course." She started to mince away.

"Hey, wait a minute!" Judy's father was the Valhalla's Chief Signal Officer, and she generally had news from a planet they were landing on a lot quicker than anyone else. "What's this all about?"

"A new quarantine regulation. They passed it two years ago when a ship back from Altair landed and the crew turned out to be loaded with some sort of weird disease. We have to stay isolated even from the other starmen in the Enclave until we've all had medical checkups."

"Do they require every ship landing to go through this?"

"Yep. Nuisance, isn't it? So the word has come from your father that since we can't go round visiting until we've been checked, the Crew's going to have a dance tonight when we touch down."

"A dance?"

"You heard me. He thought it might be a nice idea--just to keep our spirits up until the quarantine's lifted. That nasty Roger Bond has invited me," she added, with a raised eyebrow that was supposed to be sophisticated-looking.

"What's wrong with Roger? I just spent a whole afternoon crating dinosaur meat with him."

"Oh, he's--well--he just doesn't do anything to me."

"I'd like to do something to you, Alan thought. Something lingering, with boiling oil in it."

"Did you accept?" he asked, just to be polite.

"Of course not! Not yet, that is. I just thought I might get some more interesting offers, that's all," she said archly.

Oh, I see the game, Alan thought. She's looking for an invitation. He stretched way back and slowly let his eyes droop closed. "I wish you luck," he said.

She gaped at him. "Oh--you're horrible!"

"I know," he admitted coolly. "I'm actually a Neptunian mudworm, completely devoid of emotions. I'm here in disguise to destroy the Earth, and if you reveal my secret I'll eat you alive."

She ignored his sally and shook her head. "But why do I always have to go to dances with Roger Bond?"

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The Valhalla was practically a self-contained universe. The Crew was permanent; no one ever left, unless it was to jump ship the way Steve had--and Steve was the only Crewman in the Valhalla's history to do that. And no one new ever came aboard, except in the case of the infrequent changes of personnel. Judy Collier herself was one of the newest members of the Crew, and her family had come aboard five ship years ago, because a replacement signal officer had been needed.

Otherwise, things remained the same. Two or three dozen families, a few hundred people, living together year in and year out. No wonder Judy Collier always had to go to dances with Roger Bond. The actual range of eligibles was terribly limited.

That was why Steve had gone over the hill. What was it he had said? I feel the walls of the ship holding me in like the bars of a cell. Out there was Earth, population approximately eight billion or so. And up here is the Valhalla, current population precisely 176.

He knew all 176 of them like members of his own family--which they were, in a sense. There was nothing mysterious about anyone, nothing new.

And that was what Steve had wanted: something new. So he had jumped ship. Well, Alan thought, development of a hyperdrive would change the whole setup, if--if----

He hardly found the quarantine to his liking either. The starmen had only a brief stay on Earth, with just the shortest opportunity to go down to the Enclave, mingle with starmen from other ships, see a new face, trade news of the starways. It was almost criminal to deprive them of even a few hours of it.

Well, a dance was the second best thing. But it was a pretty distant second, he thought, as he pushed himself up out of the pneumochair.

He looked across the recreation room. Speak of the devil, he thought. There was Roger Bond now, stretched out and resting too under a radiotherm lamp. Alan walked over to him.

"Heard the sad news, Rog?"
"About the quarantine? Yeah." Roger glanced at his wristchron. "Guess I'd better start getting spruced up for the dance," he said, getting to his feet. He was a short, good-looking, dark-haired boy a year younger than Alan.

"Going with anyone special?"

Roger shook his head. "Who, special? Who, I ask you? I'm going to take skinny Judy Collier, I guess. There's not much choice, is there?"

"No," Alan agreed sadly, "Not much choice at all."

Together they left the recreation room. Alan felt a strange sort of hopeless boredom spreading over him, as if he had entered a gray fog. It worried him.

"See you tonight," Roger said.

"I suppose so," Alan returned dully. He was frowning.

Chapter Three

The Valhalla touched down on Earth at 1753 on the nose, to nobody's very great surprise. Captain Mark Donnell had not missed schedule once in his forty ship years in space, which covered a span of over a thousand years of Earth's history.

Landing procedure was rigidly set. The Crew debarked by family, in order of signing-on; the only exception to the order was Alan. As a member of the Captain's family--the only other member, now--he had to wait till the rest of the ship was cleared. But his turn came eventually.

"Solid ground again, Rat!" They stood on the jet-fused dirt field where the Valhalla had landed. The great golden-hulled starship was reared up on its tail, with its huge landing buttresses flaring out at each side to keep it propped up.

"Solid for you, maybe," Rat said. "But the trip's just as wobbly as ever for me, riding up here on your shoulder."

Captain Donnell's shrill whistle sounded, and he cupped his hands to call out, "The copters are here!"

Alan watched the little squadron of gray jetcopters settle to the ground, rotors slowing, and headed forward along with the rest of the Crew. The copters would take them from the bare landing field of the spaceport to the Enclave, where they would spend the next six days.

The Captain was supervising the loading of the copters. Alan sauntered over to him.

"Where to, son?"

"I'm scheduled to go over in Copter One."

"Uh-uh. I've changed the schedule." Captain Donnell turned away and signalled to the waiting crew members.

"Okay, go ahead and fill up Copter One!"

They filed aboard. "Everyone get back," the Captain yelled. A tentative chugg-chuff came from the copter; its rotors went round and it lifted, stood poised for a moment on its jetwash, and shot off northward toward the Starmen's Enclave.

"What's this about a change in schedule, Dad?"

"I want you to ride over with me in the two-man copter. Kandin took your place aboard Copter One. Let's go now," he shouted to the next group. "Start loading up Number Two."

The Crewmen began taking their places aboard the second copter, and soon its pilot signalled through the fore window that he was loaded up. The copter departed. Seeing that he would be leaving the field last, Alan made himself useful by keeping the younger Crew children from wandering.

At last the field was cleared. Only Alan and his father remained, with the little two-man copter and the tall gleaming Valhalla behind them.

"Let's go," the Captain said. They climbed in, Alan strapping himself down in the co-pilot's chair and his father back of the controls.

"I never see much of you these days," the Captain said after they were aloft. "Running the Valhalla seems to take twenty-four hours a day."

"I know how it is," Alan said.

After a while Captain Donnell said, "I see you're still reading that Cavour book." He chuckled. "Still haven't given up the idea of finding the hyperdrive, have you?"

"You know I haven't, Dad. I'm sure Cavour really did work it out, before he disappeared. If we could only discover his notebook, or even a letter or something that could get us back on the trail-----"

"It's been thirteen hundred years since Cavour disappeared, Alan. If nothing of his has turned up in all that time, it's not likely ever to show. But I hope you keep at it, anyway." He banked the copter and cut the jets; the rotors took over and gently lowered the craft to the distant landing field.

Alan looked down and out at the heap of buildings becoming visible below. The crazy quilt of outdated, clumsy old buildings that was the local Starmen's Enclave.

He felt a twinge of surprise at his father's words. The Captain had never shown any serious interest in the
possibility of faster-than-light travel before. He had always regarded the whole idea as sheer fantasy.

"I don't get it, Dad. Why do you hope I keep at it? If I ever find what I'm looking for, it's going to mean the end of Starman life as you know it. Travel between planets will be instantaneous. There--there won't be this business of making jumps and getting separated from everyone you used to know."

"You're right. I've just begun thinking seriously about this business of hyperdrive. There wouldn't be any Contraction effect. Think of the changes it would mean in Starman society! No more--no more permanent separations if someone decides to leave his ship for a while."

Alan understood what his father meant. Suddenly he saw the reason for Captain Donnell's abrupt growth of interest in the development of a hyperdrive.

It's Steve that's on his mind, Alan thought. If we had had a hyperspace drive and Steve had done what he did, it wouldn't have mattered. He'd still be my age.

Now the Valhalla was about to journey to Procyon. Another twenty years would pass before it got back, and Steve would be almost fifty by then.

That's what's on his mind, Alan thought. He lost Steve forever--but he doesn't want any more Steves to happen. The Contraction took one of his sons away. And now he wants the hyperdrive as much as I do.

Alan glanced at the stiff, erect figure of his father as they clambered out of the copter and headed at a fast clip toward the Administration Building of the Enclave. He wondered just how much pain and anguish his father was keeping hidden back of that brisk, efficient exterior.

I'll get the Cavour drive someday, Alan thought suddenly. And I'll be getting it for him as well as me.

The bizarre buildings of the Enclave loomed up before him. Behind them, just visible in the purplish twilight haze, were the tips of the shining towers of the Earther city outside. Somewhere out there, probably, was Steve.

I'll find him too, Alan thought firmly.

Most of the Valhalla's people had already been assigned rooms in the quarantine section of one of the Enclave buildings when Alan and his father arrived.

The bored-looking desk clerk--a withered-looking oldster who was probably a retired Starman--gave Alan his room number. It turned out to be a small, squarish room furnished with an immense old pneumochair long since deflated, a cot, and a washstand. The wall was a dull green, with gaping cracks in the faded paint, and cut heavily with a penknife into one wall was the inscription, BILL DANSERT SLEPT HERE, June 28 2683 in sturdy block letters.

Alan wondered how many other starmen had occupied the room before and after Bill Dansert. He wondered whether perhaps Bill Dansert himself were still alive somewhere between the stars, twelve centuries after he had left his name in the wall.

He dropped himself into the pneumochair, feeling the soggy squish of the deflated cushion, and loosened the jacket of his uniform.

"It's not luxurious," he told Rat. "But at least it's a room. It's a place to stay."

The medics started coming around that evening, checking to see that none of the newly-arrived starmen had happened to bring back any strange disease that might cause trouble. It was slow work--and the Valhalla people were told that it would take at least until the following morning before the quarantine could be lifted.

"Just a precautionary measure," said the medic apologetically as he entered Alan's room clad in a space helmet. "We really learned our lesson when that shipload from Altair came in bearing a plague."

The medic produced a small camera and focused it on Alan. He pressed a button; a droning sort of hum came from the machine. Alan felt a curious glow of warmth.

"Just a routine check," the medic apologized again. He flipped a lever in the back of the camera. Abruptly the droning stopped and a tape unravelled out of the side of the machine. The medic studied it.

"Any trouble?" Alan asked anxiously.

"Looks okay to me. But you might get that cavity in your upper right wisdom tooth taken care of. Otherwise you seem in good shape."

He rolled up the tape. "Don't you starmen ever get time for a fluorine treatment? Some of you have the worst teeth I've ever seen."

"We haven't had a chance for fluorination yet. Our ship was built before they started fluorinating the water supplies, and somehow we never find time to take the treatment while we're on Earth. But is that all that's wrong with me?"

"All that I can spot just by examining the diagnostic tape. We'll have to wait for the full lab report to come through before I can pass you out of quarantine, of course." Then he noticed Rat perched in the corner. "How about that? I'll have to examine it, too."
"I'm not an it," Rat remarked with icy dignity. "I'm an intelligent extra-terrestrial entity, native of Bellatrix VII. And I'm not carrying any particular diseases that would interest you."

"A talking rat!" The medic was amazed. "Next thing we'll have sentient amebas!" He aimed the camera at Rat. "I suppose I'll have to record you as a member of the crew," he said, as the camera began to hum.

After the medic had gone, Alan tried to freshen up at the washstand, having suddenly recalled that a dance was on tap for this evening.

As he wearily went through the motions of scrubbing his face clean, it occurred to him that he had not even bothered to speak to one of the seven or eight Crew girls he had considered inviting.

He sensed a curious disturbed feeling growing inside him. He felt depressed. Was this, he wondered, what Steve had gone through? The wish to get out of this tin can of a ship and really see the universe?

"Tell me, Rat. If you were me—"

"If I were you I'd get dressed for that dance," Rat said sharply. "If you've got a date, that is."

"That's just the point. I don't have a date. I mean, I didn't bother to make one. I know all those girls so well. Why bother?"

"So you're not going to the dance?"

"Nope."

Rat clambered up the arm of the pneumochair and swivelled his head upward till his glittering little eyes met Alan's. "You're not planning to go over the hill the way Steve did, are you? I can spot the symptoms. You look restless and fidgety the way your brother did."

After a moment of silence Alan shook his head. "No. I couldn't do that, Rat. Steve was the wild kind. I'd never be able just to get up and go, the way he did. But I've got to do something. I know what he meant. He said the walls of the ship were pressing in on him. Holding him back."

With a sudden impatient motion he ripped open the magnesnaps of his regulation shirt and took it off. He felt himself changing, inside. Something was happening to him. Maybe, he thought, he was catching whatever it was Steve had been inflamed by. Maybe he had been lying to himself all along, about being different in makeup from Steve.

"Go tell the Captain I'm not going to the dance," he ordered Rat. "Otherwise he'll wonder where I am. Tell him—tell him I'm too tired, or something. Tell him anything. But don't let him find out how I feel."

Chapter Four
The next morning, Roger Bond told him all about the dance.

"It was the dullest thing you could imagine. Same old people, same dusty old dances. Couple of people asked me where you were, but I didn't tell them anything."

"Good."

They wandered on through the heap of old, ugly buildings that composed the Starmen's Enclave. "It's just as well they think I was sick," Alan said. "I was, anyway. Sick from boredom."

He and Roger sat down carefully on the edge of a crumbling stone bench. They said nothing, just looking around. After a long while Alan broke the uncomfortable silence.

"You know what this place is? It's a ghetto. A self-imposed ghetto. Starmen are scared silly of going out into the Earther cities, so they keep themselves penned up in this filthy place instead."

"This place is really old. I wonder how far back those run-down buildings date."

"Thousand years, maybe more. No one ever bothers to build new ones. What for? The starmen don't mind living in the old ones."

"I almost wish the medical clearance hadn't come through after all," said Roger moodily.

"How so?"

"Then we'd be still quarantined up there. We wouldn't be able to come down and get another look at the kind of place this really is."

"I don't know which is worse--to be cooped up in quarantine or to go wandering around a dismal hole like the Enclave." Alan stood up, stretched, and took a deep breath. "Phew! Get a lungful of that sweet, fresh, allegedly pure Terran air! I'll take ship atmosphere, stale as it is, any time over this smoggy soup."

"I'll go along with that. Say, look--a strange face!"

Alan turned and saw a young starman of about his own age coming toward them. He wore a red uniform with gray trim instead of the orange-and-blue of the Valhalla.

"Welcome, newcomers. I suppose you're from that ship that just put down? The Valhalla?"

"Right. Name's Alan Donnell, and this is Roger Bond. Yours?"

"I'm Kevin Quantrell." He was short and stocky, heavily tanned, with a square jaw and a confident look about him. "I'm out of the starship Encounter, just back from the Aldebaran system. Been in the Enclave two weeks now--
with a lot more ahead of me."

Alan whistled. "Aldebaran! That's--let's see, 109 years round trip. You must be a real old-timer, Quantrell!"

"I was born in 3403. Makes me 473 years old, Earthtime. But I'm actually only seventeen and a half. Right before Aldebaran we made a hop to Capella, and that used up 85 years more in a hurry."

"You've got me by 170 years," Alan said. "But I'm only seventeen myself."

Quantrell grinned cockily. "It's a good thing some guy thought up this Tally system of chalking up every real day you live through. Otherwise we'd be up to here in confusion all the time."

He leaned boredly against the wall of a rickety building which once had proudly borne the chrome-steel casing characteristic of early 27th Century architecture, but whose outer surface was now brown and scaly from rust. "What do you think of our little paradise?" Quantrell asked sarcastically. "Certainly puts the Earther cities to shame."

He pointed out across the river, where the tall, glistening buildings of the adjoining Earther city shone in the morning sunlight.

"Have you ever been out there?" Alan asked.

"No," Quantrell said in a tight voice. "But if this keeps up much longer----" He clenched and unclenched his fists impatiently.

"What's the trouble?"

"It's my ship--the Encounter. We were outspace over a century, you know, and when we got back the inspection teams found so many things wrong with the ship that she needs just about a complete overhauling. They've been working her over for the last two weeks, and the way it looks it'll be another couple of weeks before she's ready to go. And I don't know how much longer I can stand being penned up in this Enclave."

"That's exactly how your brother----" Roger started to say, and stopped. "Sorry."

"That's okay," Alan said.

Quantrell cocked an eye. "What's that?"

"My brother. I had a twin, but he got restless and jumped ship last time we were down. He got left behind at blastoff time."

Quantrell nodded understandingly. "Too bad. But I know what he was up against--and I envy the lucky so-and-so. I wish I had the guts to just walk out like that. Every day that goes by in this place, I say I'm going over the hill next day. But I never do, somehow. I just sit here and wait."

Alan glanced down the quiet sun-warmed street. Here and there a couple of venerable-looking starmen were sitting, swapping stories of their youth--a youth that had been a thousand years before. The Enclave, Alan thought, is a place for old men.

They walked on for a while until the buzzing neon signs of a feelie theater were visible. "I'm going in," Roger said. "This place is starting to depress me. You?"

Alan shot a glance at Quantrell, who made a face and shook his head. "I guess I'll skip it," Alan said. "Not just now."

"Count me out too," Quantrell said.

Roger looked sourly from one to the other, and shrugged. "I think I'll go all the same. I'm in the mood for a good show. See you around, Alan."

After Roger left them, Alan and Quantrell walked on through the Enclave together. Alan wondered whether it wasn't a good idea to have gone to the feelie with Roger after all; the Enclave was starting to depress him, too, and those three-dimensional shows had a way of taking your mind off things.

But he was curious about Quantrell. It wasn't often he had a chance to talk with someone his own age from another ship. "You know," he said, "we starmen lead an empty life. You don't get to realize it until you come to the Enclave."

"I decided that a long time ago," Quantrell said.

Alan spread his hands. "What do we do? We dash back and forth through space, and we huddle here in the Enclave. And we don't like either one or the other, but we fool ourselves into liking them. When we're in space we can't wait to get to the Enclave, and once we're down here we can't wait to get back. Some life."

"Got any suggestions? Some way of fixing things up for us without queering interstellar commerce?"

"Yes," Alan snapped. "I do have a suggestion. Hyperspace drive!"

Quantrell laughed harshly. "Of all the cockeyed----"

"There you are," Alan said angrily. "First thing you do is laugh. A spacewarp drive is just some hairbrained scheme to you. But haven't you ever considered that Earth's scientists won't bother developing such a drive for us if we don't care ourselves? They're just as happy the way things are. They don't have to worry about the Fitzgerald Contraction."

"But there's been steady research on a hyperdrive, hasn't there? Ever since Cavour, I thought."
"On and off. But they don't take it very seriously and they don't get anywhere with it. If they'd really put some men to work they'd find it--and then there wouldn't be any more Enclaves or any Fitzgerald Contraction, and we starmen could live normal lives."

"And your brother--he wouldn't be cut off from his people the way he is----"

"Sure. But you laughed instead of thinking."

Quantrell looked contrite. "Sorry. Guess I didn't put much jet behind my think-machine that time. But a hyperdrive would wipe out the Enclave system, wouldn't it?"

"Of course! We'd be able to come home from space and take a normal part in Earth's life, instead of pulling away and segregating ourselves here."

Alan looked up at the seemingly unreachable towers of the Earther city just across the river from the Enclave. Somewhere out there was Steve. And perhaps somewhere out there was someone he could talk to about the hyperdrive, someone influential who might spur the needed research.

The Earther city seemed to be calling to him. It was a voice that was hard to resist. He savagely jammed down deep inside him the tiny inner voice that was trying to object. He turned, looking backward at the dingy dreary buildings of the Enclave.

He looked then at Quantrell. "You said you've been wanting to break loose. You want to get out of the Enclave, eh, Kevin?"

"Yes," Quantrell said slowly.

Alan felt excitement beginning to pound hard in the pit of his stomach. "How'd you like to go outside there with me? See the Earther city?"

"You mean jump ship?"

The naked words, put just that bluntly, stung. "No," Alan said, thinking of how his father's face had gone stony the time Alan had told him Steve wasn't coming back. "I mean just going out for a day or so--a sort of change of air. It's five days till the Valhalla's due to blast off, and you say the Encounter is stuck here indefinitely. We could just go for a day or so--just to see what it's like out there."

Quantrell was silent a long time.

"Just for a day or so?" he asked, at last. "We'll just go out, and have a look around, just to see what it's like out there." He fell silent again. Alan saw a little trickle of sweat burst out on Quantrell's cheek. He felt strangely calm himself, a little to his own surprise.

Then Quantrell smiled and the confidence returned to his tanned face. "I'm game. Let's go!"

But Rat was quizzical about the whole enterprise when Alan returned to his room to get him.

"You aren't serious, Alan. You really are going over to the Earther city?"

Alan nodded and gestured for the little extra-terrestrial to take his usual perch. "Are you daring to take my word in vain, Rat?" he asked in mock histrionics. "When I say I'm going to do something, I do it." He snapped closed his jacket and flipped the switch controlling the archaic fluorescent panels. "Besides, you can always stay here if you want to, you know."

"Never mind," Rat said. "I'm coming." He leaped up and anchored himself securely on Alan's shoulder.

Kevin Quantrell was waiting for them in front of the building. As Alan emerged Rat said, "One question, Alan."

"Shoot."

"Level, now: are you coming back--or are you going over the way Steve did?"

"You ought to know me better than that. I've got reasons for going out, but they're not Steve's reasons."

"I hope so."

Quantrell came up to them, and it seemed to Alan that there was something unconvincing about his broad grin. He looked nervous. Alan wondered whether he looked the same way.

"All set?" Quantrell asked.

"Set as I'll ever be. Let's go."

Alan looked around to see if anybody he knew might be watching. There was no one around. Quantrell started walking, and Alan fell in behind him.

"I hope you know where you're going," Alan said. "Because I don't."

Kevin pointed down the long winding street. "We go down to the foot of this street, turn right into Carhill Boulevard, head down the main drive toward the bridge. The Earther city is on the other side of the river."

"You better be right."

They made it at a fairly good clip through the sleepy Enclave, passing rapidly through the old, dry, dusty streets. Finally they came to the end of the street and rounded the corner onto Carhill Boulevard.

The first thing Alan saw was the majestic floating curve of the bridge. Then he saw the Earther city, a towering
pile of metal and masonry that seemed to be leaping up into the sky ahead of them, completely filling the view.

Alan pointed to the bridge-mouth. "That's where we go across, isn't it?"

But Quantrell hung back. He stopped in his tracks, staring dangle-jawed at the immense city facing them.

"There it is," he said quietly.

"Sure. Let's go, eh?" Alan felt a sudden burst of impatience and started heading toward the approach to the bridge.

But after three or four paces he realized Quantrell was not with him. He turned and saw the other spaceman still rooted to the ground, gazing up at the vast Earther city as if in narcoshock.

"It's big," Quantrell murmured. "Too big."

"Kevin! What's wrong?"

"Leave him alone," Rat whispered. "I have a hunch he won't be going with you."

Alan watched in astonishment as Quantrell took two steps hesitantly backward away from the bridge, then a third. There was a strange, almost thunderstruck expression on Kevin's face.

Then he broke out of it. He shook his head.

"We aren't really going across--huh, Donnell?" He gave a brittle little laugh.

"Kevin! What's wrong?"

"It's big," Alan said in utter sincerity. "I know why I'm going over there, and I'm anxious to get moving. I'm not running away, the way Steve was. I'm going to the Earther city to find my brother and to find Cavour's drive, and to bring them both back here!"

Alan reached the approach to the bridge in a few more brisk steps and paused there. The noonday sun turned the long arch of the bridge into a golden ribbon in the sky. A glowing sign indicated the pedestrian walkway. Above that, shining teardrop autos whirred by, leaving faint trails of exhaust. Alan followed the arrows and soon found himself on the bridge, heading for the city.

He glanced back a last time. There was no sign of Kevin. The Starmen's Enclave seemed utterly quiet, almost dead.

Then he turned and kept his gaze forward. The Earther city was waiting for him.

Chapter Five

He reached the end of the walkway and paused, a little stunned, staring at the incredible immensity of the city spread out before him.

"It's a big place," he said. "I've never been in a city this big."

"You were born here," Rat reminded him.

Alan laughed. "But I only stayed here a week or two at most. And that was three hundred years ago. The city's probably twice as big now as it was then. It----"

"Hey, you! Move on!" a harsh voice from behind snapped suddenly.

"What's that?"

"It's a policeman, Alan," Rat said softly. "Don't make trouble. Do as he says."

Throttling his sudden anger, Alan nodded curtly at the officer and stepped off the walkway. He was an outsider
here, and knew he couldn't expect the sort of warm fellowship that existed aboard the ship.

This was a city. A crowded, uncomfortable Earther city. These were the people who were left behind, who never saw the stars in naked glory. They weren't going to be particularly polite.

Alan found himself at an intersection, and wondered where he was to begin. He had some vague idea of finding Steve in this city as easily as he might aboard ship--just check the A Deck roster, then the B Deck, and so on until he found him. But cities weren't quite that neatly organized, Alan realized.

A long broad street ran parallel to the river. It didn't seem very promising: lined with office buildings and warehouses. At right angles to it, though, stretching out in front of him, was a colorful, crowded avenue that appeared to be a major artery of the city. He glanced tentatively in both directions, waited till a lull came in the steady procession of tiny bullet-shaped automobiles flashing by, and hastily jogged across the waterfront street and started down the avenue.

Maybe there was some kind of register of population at the City Hall. If Steve still lived in this city, he could look him up that way. If not----

Facing him were two rows of immense buildings, one on each side of the street. Above every three blocks there was a lacy aerial passageway connecting a building on one side of the street with one on the other, high above the ground. Alan looked up and saw black dots--they looked like ants, but they were people--making their way across the flexi-bridges at dizzying altitudes.

The streets were crowded. Busy stern-faced people raced madly from one place to the next; Alan was accustomed to the more orderly and peaceful life of a starship, and found himself getting jostled by passersby from both directions.

He was surprised to find the streets full of peddlers, weary-looking little men trundling along behind small slow-moving self-powered monocars full of vegetables and other produce. Every few moments one would stop and hawk his wares. As Alan started hesitantly up the endless-seeming street, one of the venders stopped virtually in front of him and looked at him imploringly. He was a small untidy-looking man with a dirty face and a red scar streaking his left cheek.


Alan looked at him, puzzled. The vender reached into his cart and pulled out a long yellow fruit with a small, thick green stem at one end. "Go on, boy. Treat yourself to some of these. Guild-grown, fresh-ripened, best there are. Half a credit for this one." He held it almost under Alan's nose. "Go on," he said insistently.

Alan fished in his pocket and produced one of the half-credit pieces he had been given in the Enclave commissary. For all he knew it was the custom of this city for a new arrival to buy the first thing offered to him by a vender; in any event, he was hungry, and it seemed that this was the easiest way to get rid of the little man. He held out the coin.

"Here. I'll take it."

The vender handed the piece of fruit over and Alan accepted it. He studied it, wondering what he was supposed to do now. It had a thick, tough rind that didn't seem at all appetizing.

The vender chuckled. "What's the matter, boy? Never seen a banana before? Or ain't you hungry?" The little man's derisive face was thrust up almost against Alan's chin.

He backed away a step or two. "Banana? Oh, sure."

He put the end of the banana in his mouth and was just about to take a bite when a savage burst of laughter cut him off.

"Looka him!" the vender cried. "Stupid spacer don't even know how to eat a banana! Looka! Looka!"

Alan took the fruit out of his mouth unbidden and stared uncomprehendingly at it. He felt uneasy; nothing in his past experience had prepared him for deliberate hostility on the part of other people. Aboard ship, you did your job and went your way; you didn't force your presence on other people or poke fun at them maliciously. It was the only way to live when you had to spend your whole lifetime with the same shipload of men and women.

But the little vender wasn't going away. He seemed very amused by everything. "You--you a spacer, no?" he demanded. By now a small crowd had paused and was watching the scene.

Alan nodded.

"Lemme show you how, spacer," the vender said, mockery topmost in his tone. He snatched the banana back from Alan and ripped back the rind with three rough snaps of his wrist. "Go on. Eat it this way. She tastes better without the peel." He laughed raucously. "Looka the spacer!"

Someone else in the crowd said, "What's he doing in the city anyway? He jump ship?"

"Yeah? Why ain't he in the Enclave like all the rest of them?"

Alan looked from one to the other with a troubled expression on his face. He didn't want to touch off any serious incident, but he was determined not to let these Earthers push him around, either. He ignored the ring of
hostile faces about him and calmly bit into the banana. The unfamiliar taste pleased him. Despite hoots and catcalls from the crowd he finished it.

"Now the spacer knows how to eat a banana," the vender commented acidly. "Here, spacer. Have another."
"I don't want another."
"Huh? No good? Earth fruits are too good for you, starman. You better learn that fast."
"Let's get out of here," Rat said quietly.
It was sensible advice. These people were just baiting him like a bunch of hounds ringing a hare. He flexed his shoulder in a signal that meant he agreed with Rat's suggestion.
"Have another banana," the vender repeated obstinately.
Alan looked around at the crowd. "I said I didn't want another banana, and I don't want one. Now get out of my way!"
No one moved. The vender and his monocar blocked the path.
"Get out of my way, I said." Alan balled the slimy banana peel up in his hand and rammed it suddenly into the vender's face. "There. Chew on that a while."
He shouldered his way past the spluttering fruit vender, and before anyone in the crowd could say or do anything he was halfway down the street, walking briskly. He lost himself in the passing stream of pedestrians. It was easy to do, despite the conspicuous orange-and-blue of his Valhalla uniform. There were so many people.
He went on for two unmolested blocks, walking quickly without looking back. Finally he decided he was safe. He glanced up at Rat. The little extra-terrestrial was sitting patiently astride his shoulder, deep, as usual, in some mysterious thoughts of his own.
"Rat?"
"What, Alan?"
"Why'd they do that? Why did those people act that way? I was a perfect stranger. They had no business making trouble for me."
"That's precisely it--you were a complete stranger. They don't love you for it. You're 300 years old and still 17 at the same time. They can't understand that. These people don't like starmen very much. The people in this city aren't ever going to see the stars, Alan. Stars are just faint specks of light that peek through the city haze at night. They're terribly, terribly jealous of you--and this is the way they show it."
"Jealous? But why? If they only knew what a starman's life is like, with the Contraction and all! If they could only see what it is to leave your home and never be able to go back--""
"They can't see it, Alan. All they can see is that you have the stars and they don't. They resent it."
Alan shrugged. "Let them go to space, then, if they don't like it here. No one's stopping them."
They walked on silently for a while. Alan continued to revolve the incident in his mind. He realized he had a lot to learn about people, particularly Earther people. He could handle himself pretty well aboard ship, but down on Earth he was a rank greenhorn and he'd have to step carefully.

He looked gloomily at the maze of streets before him and half-wished he had stayed in the Enclave, where starmen belonged. But somewhere out ahead of him was Steve. And somewhere, too, he might find the answer to the big problem, that of finding the hyperspace drive.

But it was a tall order. And he had no idea where to begin. First thing to do, he thought, is find someone halfway friendly-looking and ask if there's a central directory of citizens. Track down Steve, if possible. Time's running out. The Valhalla pulls out in a couple of days.

There were plenty of passersby--but they all looked like the kind that would keep on moving without answering his question. He stopped.
"Come right in here!" a cold metallic voice rasped, almost back of his ear. Startled, Alan looked leftward and saw a gleaming multiform robot standing in front of what looked like a shop of some sort.
"Come right in here!" the robot repeated, a little less forcefully now that it had caught Alan's attention. "One credit can win you ten; five can get you a hundred. Right in here, friend."

Alan stepped closer and peered inside. Through the dim dark blue window he could vaguely make out long rows of tables, with men seated before each one. From inside came the hard sound of another robot voice, calling off an endless string of numbers.

"Don't just stand there staring, friend," the robot urged. "Go right on through the door."
Alan nudged Rat quizzically. "What is it?"
"I'm a stranger here too. But I'd guess it was some sort of gambling place."
Alan jingled the few coins he had in his pocket. "If we had time I'd like to stop off. But--"
"Go ahead, friend, go ahead," the robot crooned, his metallic tones somehow managing to sound almost human in their urgent pleading. "Go on in. One credit can win you ten. Five can get you a hundred."

“Some other time,” Alan said.
“But, friend--one credit can win you----”
“I know.”
“--ten,” the robot continued, undismayed. “Five can get you a hundred.” By this time the robot had edged out into the street, blocking Alan's path.

“Are we going to have trouble with you too? It looks like everybody in this city is trying to sell something."
The robot pointed invitingly toward the door. "Why not try it?" it cooed. "Simplest game ever devised. Everybody wins! Go on in, friend."

Alan frowned impatiently. He was getting angrier and angrier at the robot's unceasing sales pitch. Aboard ship, no one coaxed you to do anything; if it was an assigned job, you did it without arguing, and if you were on free time you were your own master.

“I don't want to play your stupid game!”
The robot's blank stainless vanadium face showed no display of feeling whatsoever. "That's not the right attitude, friend. Everyone plays the game."

Ignoring him, Alan started to walk ahead, but the robot skipped lithely around to block him. "Won't you go in just once?"

"Look," Alan said. "I'm a free citizen and I don't want to be subjected to this sort of stuff. Now get out of my way and leave me alone before I take a can opener to you."

"That's not the right attitude. I'm just asking you as a friend----"

"And I'm answering you as one. Let me go!"

"Calm down," Rat whispered.

“They've got no business putting a machine out here to bother people like this," Alan said hotly. He took a few more steps and the robot plucked at his sleeve.

"Is that a final refusal?" A trace of incredulity crept into the robot's voice. "Everyone plays the game, you know. It's unconsumerlike to refuse. It's uncitilityke. It's bad business. It's unrotational. It's----"

Exasperated, Alan pushed the robot out of the way--hard. The metal creature went over surprisingly easily, and thudded to the pavement with a dull clanking sound.

"Are you sure----" the robot began, and then the voice was replaced by the humming sound of an internal clashing of unaligned gears.

“I guess I broke it." Alan looked down at the supine robot. "But it wasn't my fault. It wouldn't let me pass."

"We'd better move on,” Rat said. But it was too late. A burly man in a black cloak threw open the door of the gambling parlor and confronted Alan.

"What sort of stuff is this, fellow? What have you done to our servo?"

"That thing wouldn't let me pass. It caught hold of me and tried to drag me inside your place."

"So what? That's what he's for. Robohucksters are perfectly legal." Disbelief stood out on the man's face. "You mean you don't want to go in?"

"That has nothing to do with it. Even if I did want to go in, I wouldn't--not after the way your robot tried to push me."

"Watch out, kid. Don't make trouble. That's unrotational talk. You can get in trouble. Come on inside and have a game or two, and I'll forget the whole thing. I won't even bill you for repairs on my servo."

"Bill me? I ought to sue you for obstructing the streets! And I just got through telling your robot that I didn't plan to waste any time gambling at your place."

The other's lips curled into a half-sneer, half-grin. "Why not?"

"My business," Alan said stubbornly. "Leave me alone." He stalked angrily away, inwardly raging at this Earther city where things like this could happen.

"Don't ever let me catch you around here again!" the parlor man shouted after him. Alan lost himself once again in the crowd, but not before he caught the final words: "You filthy spacer!"

Filthy spacer. Alan winced. Again the blind, unreasoning hatred of the unhappy starmen. The Earthers were jealous of something they certainly wouldn't want if they could experience the suffering involved.

Suddenly, he realized he was very tired.

He had been walking over an hour, and he was not used to it. The Valhalla was a big ship, but you could go from end to end in less than an hour, and very rarely did you stay on your feet under full grav for long as an hour. Working grav was .93 Earth-normal, and that odd .07% made quite a difference. Alan glanced down at his boots, mentally picturing his sagging arches.

He had to find someone who could give him a clue toward Steve. For all he knew, one of the men he had brushed against that day was Steve--a Steve grown older and unrecognizable in what had been, to Alan, a few short
weeks.

Around the corner he saw a park--just a tiny patch of greenery, two or three stunted trees and a bench, but it was a genuine park. It looked almost forlorn surrounded by the giant skyscrapers.

There was a man on the bench--the first relaxed-looking man Alan had seen in the city so far. He was about thirty or thirty-five, dressed in a baggy green business suit with tarnished brass studs. His face was pleasantly ugly--nose a little too long, cheeks hollow, chin a bit too apparent. And he was smiling. He looked friendly.

"Excuse me, sir," Alan said, sitting down next to him. "I'm a stranger here. I wonder if you----"

Suddenly a familiar voice shouted, "There he is!"

Alan turned and saw the little fruit vender pointing accusingly at him. Behind him were three men in the silver-gray police uniforms. "That's the man who wouldn't buy from me. He's an unrotationist! Damn Spacer!"

One of the policemen stepped forward--a broad man with a wide slab of a face, red, like raw meat. "This man has placed some serious charges against you. Let's see your work card."

"I'm a starman. I don't have a work card."

"Even worse. We'd better take you down for questioning. You starmen come in here and try to----"

"Just a minute, officer." The warm mellow voice belonged to the smiling man on the bench. "This boy doesn't mean any trouble. I can vouch for him myself."

"And who are you? Let's see your card!"

Still smiling, the man reached into a pocket and drew forth his wallet. He handed a card over to the policeman--and Alan noticed that a blue five-credit note went along with the card.

The policeman made a great show of studying the card and succeeded in pocketing the bill with the same effortless sleight-of-hand that the other had used in handing it over.

"Max Hawkes, eh? That you? Free status?"

The man named Hawkes nodded.

"And this Spacer's a pal of yours?"

"We're very good friends."

"Umm. Okay. I'll leave him in your custody. But see to it that he doesn't get into any more jams."

The policeman turned away, signalling to his companions. The fruit vender stared vindictively at Alan for a moment, but saw he would have no revenge. He, too, left.

Alan was alone with his unknown benefactor.

Chapter Six

"I guess I owe you thanks," Alan said. "If they had hauled me off I'd be in real trouble."

Hawkes nodded. "They're very quick to lock people up when they don't have work cards. But police salaries are notoriously low. A five-credit bill slipped to the right man at the right time can work wonders."

"Five credits, was it? Here----"

Alan started to fumble in his pocket, but Hawkes checked him with a wave of his hand. "Never mind. I'll write it off to profit and loss. What's your name, spacer, and what brings you to York City?"

"I'm Alan Donnell, of the starship Valhalla. I'm an Unspecialized Crewman. I came over from the Enclave to look for my brother."

Hawkes' lean face assumed an expression of deep interest. "He's a starman too?"

"He--was."

"Was?"

"He jumped ship last time we were here. That was nine years ago Earthtime. I'd like to find him, though. Even though he's so much older now."

"How old is he now?"

"Twenty-six. I'm seventeen. We used to be twins, you see. But the Contraction--you understand about the Contraction, don't you?"

Hawkes nodded thoughtfully, eyes half-closed. "Mmm--yes, I follow you. While you made your last space jump he grew old on Earth. And you want to find him and put him back on your ship, is that it?"

"That's right. Or at least talk to him and find out if he's all right where he is. But I don't know where to start looking. This city is so big--and there are so many other cities all over Earth----"

Hawkes shook his head. "You've come to the right one. The Central Directory Matrix is here. You'll be able to find out where he's registered by the code number on his work card. Unless," Hawkes said speculatively, "he doesn't have a work card. Then you're in trouble."

"Isn't everyone supposed to have a work card?"

"I don't," Hawkes said.

"But----"
"You need a work card to hold a job. But to get a job, you have to pass guild exams. And in order to take the exams you have to find a sponsor who's already in the guild. But you have to post bond for your sponsor, too--five thousand credits. And unless you have the work card and have been working, you don't have the five thousand, so you can't post bond and get a work card. See? Round and round."

Alan's head swam. "Is that what they meant when they said I was unrotational?"

"No, that's something else. I'll get to that in a second. But you see the work setup? The guilds are virtually hereditary, even the fruit venders' guild. It's next to impossible for a newcomer to crack into a guild--and it's pretty tough for a man in one guild to move up a notch. You see, Earth's a terribly overcrowded planet--and the only way to avoid cutthroat job competition is to make sure it's tough to get a job. It's rough on a starman trying to bull his way into the system."

"You mean Steve may not have gotten a work card? In that case how will I be able to find him?"

"It's harder," Hawkes said. "But there's also a registry of Free Status men--men without cards. He isn't required to register there, but if he did you'd be able to track him down eventually. If he didn't, I'm afraid you're out of luck. You just can't find a man on Earth if he doesn't want to be found."

"Free Status? Isn't that what the policeman said----"

"I was in?" Hawkes nodded. "Sure, I'm Free Status. Out of choice, though, not necessity. But that doesn't matter much right now. Let's go over to the Central Directory Matrix Building and see if we can find any trail for your brother."

They rose. Alan saw that Hawkes was tall, like himself; he walked with easygoing grace. Questioningly Alan twitched his shoulder-blade in a signal that meant, What do you think of this guy, Rat?

Stick with him, Rat signalled back. He sounds okay.

The streets seemed a great deal less terrifying now that Alan had a companion, someone who knew his way around. He didn't have the feeling that all eyes were on him, any more; he was just one of the crowd. It was good to have Hawkes at his side, even if he didn't fully trust the older man.

"The Directory Building's way across town," Hawkes said. "We can't walk it. Undertube or Overshoot?"

"What?"

"I said, do you want to take the Undertube or the Overshoot? Or doesn't it matter to you what kind of transportation we take?"

Alan shrugged. "One's as good as any other."

Hawkes fished a coin out of his pocket and tossed it up. "Heads for Overshoot," he said, and caught the coin on the back of his left hand. "Heads it is. We take the Overshoot. This way."

They ducked into the lobby of the nearest building and took the elevator to the top floor. Hawkes stopped a man in a blue uniform and said, "Where's the nearest Shoot pickup?"

"Take the North Corridor bridge across to the next building. The pickup's there."

"Right."

Hawkes led the way down the corridor, up a staircase, and through a door. With sudden alarm Alan found himself on one of the bridges linking the skyscrapers. The bridge was no more than a ribbon of plastic with handholds at each side; it swayed gently in the breeze."

"You better not look down," Hawkes said. "It's fifty stories to the bottom."

Alan kept his eyes stiffly forward. There was a good-sized crowd gathered on the top of the adjoining building, and he saw a metal platform of some kind.

A vender came up to them. Alan thought he might be selling tickets, but instead he held forth a tray of soft drinks. Hawkes bought one; Alan started to say he didn't want one when he felt a sharp kick in his ankle, and he hurriedly changed his mind and produced a coin.

When the vender was gone, Hawkes said, "Remind me to explain rotation to you when we get aboard the Shoot. And here it comes now."

Alan turned and saw a silvery torpedo come whistling through the air and settle in the landing-rack of the platform; it looked like a jet-powered vessel of some kind. A line formed, and Hawkes stuffed a ticket into Alan's hand.

"I have a month's supply of them," he explained. "It's cheaper that way."

They found a pair of seats together and strapped themselves in. With a roar and a hiss the Overshoot blasted away from the landing platform, and almost immediately came to rest on another building some distance away.

"We've just travelled about half a mile," Hawkes said. "This ship really moves."

A jet-propelled omnibus that travelled over the roofs of the buildings, Alan thought. Clever. He said, "Isn't there any public surface transportation in the city?"

"Nope. It was all banned about fifty years ago, on account of the congestion. Taxis and everything. You can
still use a private car in some parts of the city, of course, but the only people who own them are those who like to impress their neighbors. Most of us take the Undertube or the Overshoot to get around."

The Shoot blasted off from its third stop and picked up passengers at its fourth. Alan glanced up front and saw the pilot peering over an elaborate radar setup.

"Westbound Shoots travel a hundred feet over the roof-tops, eastbound ones two hundred. There hasn't been a major accident in years. But about this rotation—that's part of our new economic plan."

"Which is?"

"Keep the money moving! Saving's discouraged. Spending's the thing now. The guilds are really pushing it. Instead of buying one piece of fruit from a vender, buy two. Spend, spend, spend! It's a little tough on the people in Free Status—we don't offer anything for sale, so we don't benefit much—but we don't amount to one per cent of the population, so who cares about us?"

"You mean it's sort of subversive not to spend money, is that it?" Alan asked.

Hawkes nodded. "You get in trouble if you're too openly penny-pinching. Keep the credits flowing; that's the way to be popular around here."

That had been his original mistake, Alan thought. He saw he had a lot to learn about this strange, unfriendly world if he were going to stay here long. He wondered if anyone had missed him back at the Enclave, yet. Maybe it won't take too long to find Steve, he thought. I should have left a note for Dad explaining I'd be back. But----

"Here we are," Hawkes said, nudging him. The door in the Overshoot's side opened and they got out quickly. They were on another rooftop.

Ten minutes later they stood outside an immense building whose walls were sleek slabs of green pellucite, shining with a radiant inner warmth of their own. The building must have been a hundred stories high, or more. It terminated in a burnished spire.

"This is it," Hawkes said. "The Central Directory Building. We'll try the Standard Matrix first."

A little dizzy, Alan followed without discussing the matter. Hawkes led him through a vast lobby big enough to hide the Valhalla in, past throngs of Earthers, into a huge hall lined on all sides by computer banks.

"Let's take this booth here," Hawkes suggested. They stepped into it; the door clicked shut automatically behind them. There was a row of blank forms in a metal rack against the inside of the door.

Hawkes pulled one out. Alan looked at it. It said, CENTRAL DIRECTORY MATRIX INFORMATION REQUISITION 1067432. STANDARD SERIES.

Hawkes took a pen from the rack. "We have to fill this out. What's your brother's full name?"

"Steve Donnell." He spelled it.

"Year of birth?"

Alan paused. "3576," he said finally.

Hawkes frowned, but wrote it down that way.

"Work card number—well, we don't know that. And they want five or six other numbers too. We'll just have to skip them. Better give me a full physical description as of the last time you saw him."

Alan thought a moment. "He looked pretty much like me. Height 73 inches, weight 172 or so, reddish-blond hair, and so on."

"Don't you have a gene-record?"

Blankly, Alan said, "A what?"

Hawkes scowled. "I forgot—I keep forgetting you're a spacer. Well, if he's not using his own name any more it may make things really tough. Gene-records make absolute identification possible. But if you don't have one----"

Whistling tunelessly, Hawkes filled out the rest of the form. When it came to REASON FOR APPLICATION, he wrote in, Tracing of missing relative.

"That just about covers it," he said finally. "It's a pretty lame application, but if we're lucky we may find him."

He rolled the form up, shoved it into a gray metal tube, and dropped it in a slot in the wall.

"What happens now?" Alan asked.

"Now we wait. The application goes downstairs and the big computer goes to work on it. First thing they'll do is kick aside all the cards of men named Steve Donnell. Then they'll check them all against the physical description I supplied. Soon as they find a man who fits the bill, they'll 'stat his card and send it up here to us. We copy down the televector number and have them trace him down."

"The what number?"

"You'll see," Hawkes said, grinning. "It's a good system. Just wait."

They waited. One minute, two, three.

"I hope I'm not keeping you from something important," Alan said, breaking a long uncomfortable silence. "It's really good of you to take all this time, but I wouldn't want to inconvenience you if----"
"If I didn't want to help you," Hawkes said sharply, "I wouldn't be doing it. I'm Free Status, you know. That means I don't have any boss except me. Max Hawkes, Esquire. It's one of the few compensations I have for the otherwise lousy deal life handed me. So if I choose to waste an hour or two helping you find your brother, don't worry yourself about it."

A bell rang, once, and a gentle red light glowed over the slot. Hawkes reached in and scooped out the container that sat there.

Inside he found a rolled-up slip of paper. He pulled it out and read the message typed on it several times, pursing his lips.

"Well? Did they find him?"

"Read it for yourself," Hawkes said. He pushed the sheet over to Alan.

It said, in crisp capital letters, A SEARCH OF THE FILES REVEALS THAT NO WORK CARD HAS BEEN ISSUED ON EARTH IN THE PAST TEN YEARS TO STEVE DONNELL, MALE, WITH THE REQUIRED PHYSICAL CHARACTERISTICS.

Alan's face fell. He tossed the slip to the table and said, "Well? What do we do now?"

"Now," Hawkes said, "we go upstairs to the cubbyhole where they keep the Free Status people registered. We go through the same business there. I didn't really expect to find your brother here, but it was worth a look. It's next to impossible for a ship-jumping starman to buy his way into a guild and get a work card."

"Suppose he's not registered with the Free Status people?"

Hawkes smiled patiently. "Then, my dear friend, you go back to your ship with your mission incomplete. If he's not listed upstairs, there's no way on Earth you could possibly find him."

Chapter Seven

Chapter Seven

The sign over the office door said REGISTRY OF FREE-STATUS LABOR FORCE, and under that ROOM 1104. Hawkes nudged the door open and they went in.

It was not an imposing room. A fat pasty-faced man sat behind a scarred neoplast desk, scribbling his signature on forms that he was taking from an immense stack. The room was lined with records of one sort or another, untidy, poorly assembled. There was dust everywhere.

The man at the desk looked up as they entered and nodded to Hawkes. "Hello, Max. Making an honest man of yourself at last?"

"Not on your life," Hawkes said. "I came up here to do some checking. Alan, this is Hines MacIntosh, Keeper of the Records. Hines, want you to meet a starman friend of mine. Alan Donnell."

"Starman, eh?" MacIntosh's pudgy face went suddenly grave. "Well, boy, I hope you know how to get along on an empty stomach. Free Status life isn't easy."

"No," Alan said. "You don't under----"

Hawkes cut him off. "He's just in the city on leave, Hines. His ship blasts off in a couple of days and he figures to be on it. But he's trying to track down his brother, who jumped ship nine years back."

MacIntosh nodded. "I suppose you drew a blank in the big room downstairs?"

"Yes."

"Not surprising. We get these ship-jumping starmen all the time up here; they never do get work cards, it seems. What's that thing on your shoulder, boy?"

"He's from Bellatrix VII."

"Intelligent?"

"I should say so!" Rat burst in indignantly. "Just because I have a certain superficial physiological resemblance to a particular species of unpleasant Terran rodent----"

MacIntosh chuckled and said, "Ease up! I didn't mean to insult you, friend! But you'll have to apply for a visa if you're going to stay here more than three days."

Alan frowned. "Visa?"

Hawkes cut in: "The boy's going back on his ship, I told you. He won't need a visa, or the alien either."

"Be that as it may," MacIntosh said. "So you're looking for your brother, boy? Give me the specifications, now. Name, date of birth, and all the rest."

"His name is Steve Donnell, sir. Born 3576. He jumped ship in----"

"Born when, did you say?"

"They're spacers," Hawkes pointed out quietly.

MacIntosh shrugged. "Go ahead."

"Jumped ship in 3867--I think. It's so hard to tell what year it is on Earth."

"And physical description?"

"He was my twin," Alan said. "Identical twin."
MacIntosh jotted down the data Alan gave him and transferred it to a punched card. "I don't remember any spacers of that name," he said, "but nine years is a long time. And we get so many starmen coming up here to take out Free Status."

"You do?"

"Oh, fifteen or twenty a year, at least--and that's in this office alone. They're forever getting stranded on leave and losing their ships. Why, there was one boy who was robbed and beaten in the Frisco Enclave and didn't wake up for a week. Naturally he missed his ship, and no other starship would sign him on. He's on Free Status now, of course. Well, let's see about Donnell Steve Male, shall we? You realize the law doesn't require Free Status people to register with us, and so we may not necessarily have any data on him in our computer files?"

"I realize that," Alan said tightly. He wished the chubby records-keeper would stop talking and start looking for Steve's records. It was getting along toward late afternoon now; he had come across from the Enclave around noontime, and certainly it was at least 1600 by now. He was getting hungry--and he knew he would have to start making plans for spending the night somewhere, if he didn't go back to the Enclave.

MacIntosh pulled himself laboriously out of his big webwork cradle and wheezed his way across the room to a computer shoot. He dropped the card in.

"It'll take a few minutes for them to make the search," he said, turning. He looked in both directions and went on, "Care for a drink? Just to pass the time?"

Hawkes grinned. "Good old Hinesy! What's in the inkwell today?"

"Scotch! Bottled in bond, best syntho stuff to come out of Caledonia in the last century!" MacIntosh shuffled back behind his desk and found three dingy glasses in one of the drawers; he set them out and uncorked a dark blue bottle plainly labelled INK.

He poured a shot for Hawkes and then a second shot; as he started to push it toward Alan, the starman shook his head. "Sorry, but I don't drink. Crewmen aren't allowed to have liquor aboard starships. Regulation."

"Oh, but you're off-duty now!"

Alan shook his head a second time; shrugging, MacIntosh took the drink himself and put the unused third glass back in the drawer.

"Here's to Steve Donnell!" he said, lifting his glass high. "May he have had the good sense to register his name up here!"

They drank. Alan watched. Suddenly, the bell clanged and a tube rolled out of the computer shoot.

Alan waited tensely while MacIntosh crossed the room again, drew out the contents of the tube, and scanned them. The fat man's face was broken by a smile.

"You're in luck, starman. Your brother did register with us. Here's the 'stat of his papers."

Alan looked at them. The photostat was titled, APPLICATION FOR ADMISSION TO FREE-STATUS LABOR FORCE, and the form had been filled out in a handwriting Alan recognized immediately as Steve's: bold, untidy, the letters slanting slightly backward.

He had given his name as Steve Donnell, his date of birth as 3576, his chronological age as seventeen. He had listed his former occupation as Starman. The application was dated 4 June 3867, and a stamped notation on the margin declared that Free Status had been granted on 11 June 3867.

"So he did register," Alan said. "But now what? How do we find him?"

Hawkes reached for the photostat. "Here. Let me look at that." He squinted to make out the small print, then nodded and wrote down something. "His televector number's a local one. So far, so good." He turned the form over and glanced at the reproduced photo of Steve on the back. He looked up, comparing it with Alan.

"Dead ringers, these two. But I'll bet this one doesn't look much like this any more--not after nine years of Free Status!"

"It only pays off for the lucky few, eh, Max?" MacIntosh asked slyly.

Hawkes grinned. "Some of us make out all right. You have to have the knack, though. You can get awful hungry otherwise. Come on, kid--let's go up a little higher, now. Up to the televector files. Thanks for the help, Hinesy. You're a pal."

"Just doin' my job," MacIntosh said. "See you tonight as usual?"

"I doubt it," Hawkes replied. "I'm going to take the night off. I have it coming to me."

"That leaves the coast clear for us amateurs, doesn't it? Maybe I'll come out ahead tonight."

Hawkes smiled coldly. "Maybe you will. Let's go, kid."

They took the lift tube outside and rode it as high as it went. It opened out into the biggest room Alan had ever seen, bigger even than the main registry downstairs--a vast affair perhaps a hundred feet high and four hundred feet on the side.

And every inch of those feet was lined with computer elements.
"This is the nerve-center of the world," Hawkes said as they went in. "By asking the right questions you can find out where anybody in the world happens to be at this very moment."

"How can they do that?"

Hawkes nudged a tiny sliver of metal embedded in a ring on his finger. "Here's my televector transmitter. Everyone who has a work card or Free Status carries one, either on a ring or in a locket round his neck or somewhere else. Some people have them surgically embedded in their bodies. They give off resonance waves, each one absolutely unique; there's about one chance in a quadrillion of a duplicate pattern. The instruments here can pick up a given pattern and tell you exactly where the person you're looking for is."

"So we can find Steve without much trouble!"

"Probably." Hawkes' face darkened. "I've known it to happen that the televector pattern picks up a man who's been at the bottom of the sea for five years. But don't let me scare you; Steve's probably in good shape."

He took out the slip of paper on which he had jotted down Steve's televector code number and transferred the information to an application blank.

"This system," Alan said. "It means no one can possibly hide anywhere on Earth unless he removes his televector transmitter."

"You can't do that, though. Strictly illegal. An alarm goes out whenever someone gets more than six inches from his transmitter, and he's picked up on suspicion. It's an automatic cancellation of your work card if you try to fool with your transmitter—or if you're Free Status a fine of ten thousand credits."

"And if you can't pay the fine?"

"Then you work it off in Government indenture, at a thousand credits a year—chopping up rocks in the Antarctica Penitentiary. The system's flawless. It has to be. With Earth as overpopulated as it is, you need some system of tracking down people—otherwise crime would be ten times as prevalent as it is now."

"There still is crime?"

"Oh, sure. There's always somebody who needs food bad enough to rob for it, even though it means a sure arrest. Murder's a little less common." Hawkes fed the requisition slip into the slot. "You'd be surprised what a deterrent the televector registry system is. It's not so easy to run off to South America and hide when anybody at all can come in here and find out exactly where you are."

A moment went by. Then the slot clicked and a glossy pink slip came rolling out.

Alan looked at it. It said:

TELEVECTOR REGISTRY 21 May 3876 Location of Donnell Steve, YC83-10j6490k37618 Time: 1643:21

There followed a street map covering some fifteen square blocks, and a bright red dot was imprinted in the center of the map.

Hawkes glanced at the map and smiled. "I thought that was where he would be!"

"Where's that?"

"68th Avenue and 423rd Street."

"Is that where he lives?" Alan asked.

"Oh, no. The televector tells you where he is right now. I'd venture to say that was his—ah—place of business."

Alan frowned. "What are you talking about?"

"That happens to be the address of the Atlas Games Parlor. Your brother Steve probably spends most of his working day there, when he has enough cash to get in. I know the place. It's a cheap joint where the payoffs are low but easy. It's the kind of place a low-budget man would frequent."

"You mean Steve's a gambler?"

Hawkes smiled. "Most Free Status men are. It's one of the few ways we can earn a living without getting a work card. There isn't any gamblers' guild. There are a few other ways, too, but they're a lot less savory, and the televector surveillance makes it hard for a man to stay in business for long."

Alan moistened his lips. "What do you do?"

"Gamble. I'm in the upper brackets, though. As I say: some of us have the knack. I doubt if your brother does, though. After nine years he wouldn't still be working the Atlas if he had any dough."

Alan shrugged that off. "How do we get there? I'd like to go right away. I----"

"Patience, lad," Hawkes murmured. "There's plenty of time for that. When does your ship leave?"

"Couple of days."

"Then we don't need to rush right over to the Atlas now. Let's get some food in ourselves first. Then a good night's rest. We can go over there tomorrow."

"But my brother----"

"Your brother," Hawkes said, "has been in York City for nine years, and I'll bet he's spent every night for the last eight of them sitting in the Atlas. He'll keep till tomorrow. Let's get something to eat."
Chapter Eight

They ate in a dark and unappealing restaurant three blocks from the Central Directory Matrix Building. The place was crowded, as all Earth places seemed to be. They stood on line for nearly half an hour before being shown to a grease-stained table in the back.

The wall clock said 1732.

A robowaiter approached them, holding a menu board in its metal hands. Hawkes leaned forward and punched out his order; Alan took slightly longer about it, finally selecting protein steak, synthocoffee, and mixed vegetables. The robot clicked its acknowledgement and moved on to the next table.

"So my brother's a gambler," Alan began.

Hawkes nodded. "You say it as if you were saying, so my brother's a pickpocket, or so my brother's a cutpurse. It's a perfectly legitimate way of making a living." Hawkes' eyes hardened suddenly, and in a flat quiet voice added, "The way to stay out of trouble on Earth is to avoid being preachy, son. This isn't a pretty world. There are too many people on it, and not many can afford the passage out to Gamma Leonis IV or Algol VII or some of the nice uncluttered colony-worlds. So while you're in York City keep your eyes wide and your mouth zippered, and don't turn your nose up at the sordid ways people make their livings."

Alan felt his face go red, and he was happy to have the trays of food arrive at that moment, causing some sort of distraction. "Sorry, Max. I didn't mean to sound preachy."

"I know, kid. You lead a pretty sheltered life on those starships. And nobody can adjust to Earthside life in a day. How about a drink?"

Alan started to say that he didn't drink, but kept the words back. He was on Earth, now, not aboard the Valhalla; he wasn't required to keep ship's regs. And he didn't want to be trying to look superior. "Okay. How about Scotch--is that the stuff MacIntosh was drinking?"

"Fair enough," Hawkes said.

He signalled for a robot waiter, and after a moment the robot slithered up to them. Hawkes punched a lever on the robot's stomach and the metal creature began to click and glow. An instant later a panel in its stomach slid open and two glasses appeared within. The robot's wiry tentacles reached in, took out the drinks, and set them on the table. Hawkes dropped a coin in a slot in the robot's side, and the machine bustled away, its service completed.

"There you are," Hawkes said, pointing to the glass of amber-colored liquid. "Drink up." As if to set an example he lifted his own drink and tossed it down in one gulp, with obvious pleasure.

Alan picked up the little glass and held it before his eyes, staring at the man opposite him through its translucent depths. Hawkes appeared oddly distorted when viewed through the glass.

He grinned. He tried to propose a toast, but couldn't think of any appropriate words, so he simply upended the glass and drained its contents. The stuff seemed to burn its way down his throat and explode in his stomach; the explosion rose through his gullet and into his brain. For a moment he felt as if the top of his head had been blown off. His eyes watered.

"Pretty potent stuff!"

"It's the best there is," Hawkes said. "Those boys really know the formulas."

Alan felt a wave of dizziness, but it passed quickly; all that was left was a pleasant inner warmth, now. He pulled his tray toward him and attacked the synthetic meat and vegetables.

He ate quietly, making no attempt at conversation. Soft music bubbled up around them. He thought about his brother. So Steve was a gambler! And doing poorly at it, Hawkes said. He wondered if Steve would want to go back on the Valhalla; he wondered also how it would be if Steve did agree to go back.

The old comradeship would be gone, he realized sadly. They had shared everything for seventeen years, grown up together, played together, worked together. Up till six weeks ago they had been so close that Alan could almost read Steve's mind, and Steve Alan's. They made a good team.

But that was finished, now. Steve would be a stranger to him aboard the Valhalla--an older, perhaps wiser man, with nine solid years of tough Earther life behind him. He would not be able to help but regard Alan as a kid, a greenhorn; it was natural. They would never be comfortable in each other's presence, with the old easy familiarity that was so close to telepathy. That nine-year gulf would see to that.

"Thinking about your brother, aren't you?"

Alan blinked. "How did you know?"

Grinning, Hawkes said, "A gambler has to know how to figure things. And it's written in permoscript all over your forehead anyway. You're wondering what the first face-to-face meeting's going to be like. I'll bet on it."

"I won't cover the bet. You'd win."

"You want to know how it'll be? I can tell you, Alan: you'll feel sick. Sick and bewildered and ashamed of the guy who used to be your brother. But that'll pass. You'll look behind the things the nine years did to him, and you'll
see your brother back there. He'll see you, too. It won't be as bad as you're expecting."

Somehow Alan felt relieved. "You're sure of that?"

Hawkes nodded. "You know, I'm taking such a personal interest in this business because I've got a brother too. Had a brother."

"Had?"

"Kid about your age. Same problem I had, too: no guild. We were born into the street sweepers' guild, but neither of us could go for that, so we checked out and took Free Status. I went into gambling. He hung around the Enclave. He always wanted to be a spacer."

"What happened to him?"

"He pulled a fast one. Starship was in town and looking for a new galley-boy. Dave did some glib talking and got aboard. It was a fluke thing, but he made it."

"Which ship?" Alan asked.

"Startreader. Bound out on a hop to Beta Crucis XVIII. 465 light-years." Hawkes smiled faintly. "He left a year, year and a half ago. The ship won't be back on Earth again for nine hundred thirty years or so. I don't figure to be around that long." He shook his head. "Let's get out of here. People waiting for tables."

Out in the street again, Alan noticed that the sun was low in the sky; it was past 1800, and getting along toward evening. But the streets were not getting dark. From everywhere a soft glow was beginning to radiate--from the pavement, the buildings, everywhere. It was a gentle gleaming brightness that fell from the air; there was no perceptible change from day-illumination to night-illumination.

But it was getting late. And they would miss him back at the Enclave--unless Captain Donnell had discovered that Alan had gone into the Earther city, in which case he wouldn't be missed at all. Alan remembered sharply the way the Captain had calmly blotted the name of his son Steve from the Valhalla's roster as if Steve had never existed.

"Are we going to go over to the Atlas now?"

Hawkes shook his head. "Not unless you want to go in there alone?"

"Huh?"

"I can't go in there with you. I've got an A card, and that's a Class C joint."

"You mean even gambling places are classified and regulated and everything?"

Hawkes nodded. "It has to be that way. This is a very complicated society you've stumbled into, Alan. Look: I'm a first-rate gamesman. That's not boasting; it's empirical truth proven over and over again during the course of a fifteen-year career. I could make a fortune competing against beginners and dubs and has-beens, so they legislate against me. You make a certain annual income from gambling and you go into Class A, and then you can't enter any of the lower-class joints like the Atlas. You slip under the Class A minimum three years in a row and you lose your card. I stay over the minimum."

"So I'll have to go after Steve myself. Well, in that case, thanks for all the help, and if you'll show me which Shoot I take to get to the Atlas----""

"Not so fast, son." Hawkes grasped Alan's wrist. "Even in a Class C dump you can lose plenty. And you can't just stand around hunting for your brother. Unless you're there as a learner you'll have to play."

"So what am I supposed to do?"

"I'll take you to a Class A place tonight. You can come in as a learner; they all know me. I'll try to show you enough about the game so you don't get rooked. Then you can stay over at my place and tomorrow we'll go up to the Atlas and look around for your brother. I'll have to wait outside, of course."

Alan shrugged. He was beginning to realize he was a little nervous about the coming meeting with Steve--and perhaps, he thought, a little extra delay would be useful. And he still had plenty of time to get back to the Valhalla after he saw Steve, even if he stayed in the city overnight.

"Well?" Hawkes said.

"Okay. I'll go with you."

This time they took the Undertube, which they reached by following a glowing sign and then an underground passageway. Alan rode down behind Hawkes on the moving ramp and found himself in a warm, brightly-lit underground world with stores, restaurants, newsboys hawking telefax sheets, milling swarms of homebound commuters.

They reached the entrance to a tube and Hawkes handed him a small oval object with figures engraved on it. "That's your tube-token. It goes in the slot."

They passed through the turnstile and followed signs indicating the West Side Tube. The tube was a long sleek affair, windowless, shaped like a bullet. The tube was already packed with commuters when they got aboard; there were no empty seats, of course, and everyone seemed to be jostling everyone else for the right to stand upright. The
The sign at the end of the tube said, Tube X#3174-WS.

The trip took only a few minutes of seemingly effortless gliding, and then they emerged far on the other side of the giant city. The neighborhood they were in was considerably less crowded; it had little of the mad hubbub of the downtown district.

A neon sign struck his eyes at once: SUPERIOR GAMES PARLOR. Under that in smaller letters was: CLASS A ESTABLISHMENT. A robot stood outside, a gleaming replica of the one he had tussled with earlier in the day. "Class A only," the robot said as they came near. "This Games Parlor is for Class A only."

Hawkes stepped around him and broke the photo-contact on the door. Alan followed him in.

The place was dimly lit, as all Earther pleasure-places seemed to be. Alan saw a double row of tables spreading to the back of the parlor. At each table was an earnest-looking citizen hunched over a board, watching the pattern of lights in front of him come and go, change and shift.

Another robot glided up to them. "May I see your card, please?" It purred.

Hawkes passed his card before the robot's photonic scanners and the robot clicked acknowledgement, stepping to one side and letting Hawkes pass. It turned to Alan and said, "May I see your card, please?"

"I don't----"

"He's with me," Hawkes said. "A learner."

A man in a dirty gray smock came up to them. "Evening, Max. Hinesy was here already and told me you weren't coming in tonight."

"I wasn't, but I changed my mind. I brought a learner along with me--friend of mine name of Alan Donnell. This is Joe Luckman, Alan. He runs this place."

Luckman nodded absently to Alan, who mumbled a greeting in return.

"Guess you want your usual table?" Luckman asked.

"If it's open," Hawkes said.

"Been open all evening."

Luckman led them down the long aisle to the back of the big hall, where there was a vacant table with one seat before it. Hawkes slid smoothly into the seat and told Alan to stand behind him and watch carefully.

"We'll start at the beginning of the next round," he said.

Alan looked around. Everywhere men were bent over the patterns of lights on the boards before them, with expressions of fierce concentration on their faces. Far in the corner Alan saw the pudgy figure of MacIntosh, the Keeper of the Records; MacIntosh was bathed in his own sweat, and sat rigid as if hypnotized.

Hawkes nudged him. "Keep your eyes on me. The others don't matter. I'm ready to get started."

Chapter Nine

Hawkes took a coin from his pocket and dropped it in a slot at the side of the board. It lit up. A crazy, shifting pattern of colored lights passed over it, restless, never pausing.

"What happens now?"

"You set up a mathematical pattern with these keys," Hawkes said, pointing to a row of enamelled studs along the side of the machine. "Then the lights start flashing, and as soon as they flash--at random, of course--into the pattern you've previously set up, you're the winner. The skill of the game comes in predicting the kind of pattern that will be the winning one. You've got to keep listening to the numbers that the croupier calls off, and fit them into your sequence."

Suddenly a bell rang loudly, and the board went dead. Alan looked around and saw that all the other boards in the hall were dark as well.

The man on the rostrum in the center of the hall cleared his throat and sang out, "Table 403 hits us for a hundred! 403! One hundred!"

A pasty-faced bald man at a table near theirs rose with a broad grin on his face and went forward to collect. Hawkes rapped sharply on the side of the table to get Alan's attention.

"Look here, now. You have to get a head start. As soon as the boards light up again, I have to begin setting up my pattern. I'm competing against everyone else here, you see. And the quickest man wins, usually. Of course, blind luck sometimes brings you a winner--but not very often."
Alan nodded and watched carefully as Hawkes' fingers flew nimbly over the controlling studs the instant the tables lit for the next round. The others nearby were busy doing the same thing, but few of them set about it with the air of cocky jauntiness that Hawkes wore.

Finally he stared at the board in satisfaction and sat back. The croupier pounded three times with a little gavel and said, "103 sub-prime 5."

Hastily Hawkes made a correction in his equation. The lights on the board flickered and faded, moving faster than Alan could see.

"377 third-quadrant 7."

Again a correction. Hawkes sat transfixed, staring intently at the board. The other players were similarly entranced, Alan saw. He realized it was possible for someone to become virtually hypnotized by the game, to spend days on end sitting before the board.

He forced himself to follow Hawkes' computations as number after number was called off. He began to see the logical pattern of the game.

It was a little like astrogation, in which he had had the required preliminary instruction. When you worked out a ship's course, you had to keep altering it to allow for course deflection, effects of planetary magnetic fields, meteor swarms, and such obstacles--and you had to be one jump ahead of the obstacles all the time.

It was the same here. The pilot board at the croupier's rostrum had a prearranged mathematical pattern on it. The idea of the game was to set up your own board in the identical pattern. As each succeeding coordinate on the graph was called out, you recomputed in terms of the new probabilities, rubbing out old equations and substituting new ones.

There was always the mathematical chance that a pattern set up at random would be identical to the master control pattern--but that was a pretty slim chance. It took brains to win at this game. The man whose board was first to match the pilot pattern won.

Hawkes worked quietly, efficiently, and lost the first four rounds. Alan commiserated. But the gambler snapped, "Don't waste your pity. I'm still experimenting. As soon as I've figured out the way the numbers are running tonight, I'll start raking it in."

It sounded boastful to the starman, but Hawkes won on the fifth round, matching the hidden pattern in only six minutes. The previous four rounds had taken from nine to twelve minutes before a winner appeared. The croupier, a small, sallow-faced chap, shoved a stack of coins and a few bills at Hawkes when he went to the rostrum to claim his winnings. A low murmur rippled through the hall; Hawkes had evidently been recognized.

His take was a hundred credits. In less than an hour, he was already seventy-five credits to the good. Hawkes' sharp eyes glinted brightly; he was in his element now, and enjoying it.

The sixth round went to a bespectacled round-faced man three tables to the left, but Hawkes won a hundred credits each on the seventh and eighth rounds, then lost three in a row, then plunged for a heavy stake in his ninth round and came out ahead by five hundred credits.

So Hawkes had won four times in nine rounds, Alan thought. And there were at least a hundred people in the hall. Even assuming the gambler did not always have the sort of luck he was having now, that meant most people did not win very often, and some did not win at all.

As the evening went along, Hawkes made it look simple. At one point he won four rounds in a row; then he dropped off for a while, but came back for another big pot half an hour later. Alan estimated Hawkes' night's work had been worth more than a thousand credits so far.

The gambler pushed his winnings to fourteen hundred credits, while Alan watched; the fine points of the game became more comprehensible to him with each passing moment, and he longed to sit down at the table himself. That was impossible, he knew; this was a Class A parlor, and a rank beginner such as himself could not play.

But then Hawkes began to lose. Three, four, five rounds in a row slipped by without a win. At one point Hawkes committed an elementary mistake in arithmetic that made Alan cry out; Hawkes turned and silenced him with a fierce bleak scowl, and Alan went red.

Six rounds. Seven. Eight. Hawkes had lost nearly a hundred of his fourteen hundred credits. Luck and skill seemed to have deserted him simultaneously. After the eleventh consecutive losing round, Hawkes rose from the table, shaking his head bitterly.

"I've had enough. Let's get out of here."

He pocketed his winnings--still a healthy twelve hundred credits, despite his late-evening slump--and Alan followed him out of the parlor into the night. It was late now, past midnight. The streets, fresh and clean, were damp. It had rained while they were in the parlor, and Alan realized wryly he had been so absorbed by the game that he had not even noticed.

Crowds of home-going Yorkers moved rapidly through the streets. As they made their way to the nearest
Undertube terminal, Alan broke the silence. "You did all right tonight, didn't you?"

"Can't complain."

"It's too bad you had that slump right at the end. If you'd quit half an hour earlier you'd be two hundred credits richer."

Hawkes smiled. "If you'd been born a couple of hundred years later, you'd be a lot smarter."

"What is that supposed to mean?" Alan felt annoyed by Hawkes' remark.

"Simply that I lost deliberately toward the end. They turned into the Undertube station and headed for the ticket windows. "It's part of a smart gambler's knowhow to drop a few credits deliberately now and then."

"Why?"

"So the jerks who provide my living keep on coming back," Hawkes said bluntly. "I'm good at that game. Maybe I'm the best there is. I can feel the numbers with my hands. If I wanted to, I could win four out of five times, even at a Class A place."

Alan frowned. "Then why don't you? You could get rich!"

"I am rich," Hawkes said in a tone that made Alan feel tremendously foolish. "If I got much richer too fast I'd wind up with a soft burn in the belly from a disgruntled customer. Look here, boy: how long would you go back to that casino if one player took 80% of the pots, and a hundred people competed with you for the 20% he left over? You'd win maybe once a month, if you played full time every day. In a short time you'd be broke, unless you quit playing first. So I ease up. I let the others win about half the time. I don't want all the money the mint turns out--just some of it. It's part of the economics of the game to let the other guys take a few pots."

Alan nodded. He understood. "And you don't want to make them too jealous of you. So you made sure you lost consistently for the final half hour or so, and that took the edge off your earlier winning in their minds."

"That's the ticket!"

The Undertube pulled out of the station and shot bullet-like through its dark tunnel. Silently, Alan thought about his night's experience. He saw he still had much, very much to learn about life on Earth.

Hawkes had a gift--the gift of winning. But he didn't abuse that gift. He concealed it a little, so the people who lacked his talent did not get too jealous of him. Jealousy ran high on Earth; people here led short ugly lives, and there was none of the serenity and friendliness of life aboard a starship.

He felt very tired, but it was just physical fatigue; he felt wide awake mentally. Earth life, for all its squalor and brutality, was tremendously exciting compared with shipboard existence. It was with a momentary pang of something close to disappointment that he remembered he would have to report back to the Valhalla in several days; there were so many fascinating aspects of Earth life he still wanted to explore.

The Undertube stopped at a station labelled Hasbrouck. "This is where we get off," Hawkes told him.

They took a slidewalk to street level. The street was like a canyon, with towering walls looming up all around. And some of the gigantic buildings seemed quite shabby-looking by the street-light. Obviously they were in a less respectable part of the city.

"This is Hasbrouck," Hawkes said. "It's a residential section. And there's where I live."

He pointed to the tarnished chrome entrance of one of the biggest and shabbiest of the buildings on the street. "Be it ever so humble, there's no place like North Hasbrouck Arms. It's the sleaziest, cheapest, most run-down tenement in one hemisphere, but I love it. It's a real palace."

Alan followed him through a gate that had once been imposing; now it swung open rather rustily as they broke the photobeam in front of it. The lobby was dark and dimly lit, and smelled faintly musty.

Alan was unprepared for the shabbiness of the house where the gambler lived. A moment after he spoke, he realized the question was highly impertinent, but by then it was too late: "I don't understand, Max. If you make so much money gambling, why do you live in a place like this? Aren't there any better--I mean----"

An unreadable expression flitted briefly across the gambler's lean face. "I know what you mean. Let's just say that the laws of this planet discriminate slightly against Free Status people like yours truly. They require us to live in approved residences."

"But this is practically a slum."

"Forget the practically. This is the raw end of town, and no denying it. But I have to live here." They entered a creaky old elevator decorated with too much chrome, most of it chipped, and Hawkes pressed 106. "When I first moved in here, I made up my mind I'd bribe my way into a fancier neighborhood as soon as I had the cash. But by the time I had enough to spare I didn't feel like moving, you see. I'm sort of lazy."

The elevator stopped with a jarring jolt at the hundred-sixth floor. They passed down a narrow, poorly-lit corridor. Hawkes paused suddenly in front of a door, pressed his thumb against the doorplate, and waited as it swung open in response to the imprint of his fingerprints against the sensitive electronic grid.

"Here we are," he said.
It was a three-room apartment that looked almost as old and as disreputable as the rooms in the Enclave. But the furniture was new and attractive; these were not the rooms of a poor man. An elaborate audio system took up one entire wall; elsewhere, Alan saw books of all kinds, tapes, a tiny mounted globe of light-sculpture within whose crystal interior abstract colors flowed kaleidoscopically, a handsome robot bar.

Hawkes gestured Alan to a seat; Alan chose a green lounge-chair with quivering springs and stretched out. He did not want to go to sleep; he wanted to stay up half the night and talk.

The gambler busied himself at the bar a moment and returned with two drinks. Alan looked at the glass a moment: the drink was bright yellow in color, sparkling. He sipped it. The flavor was gentle but striking, a mixture of two or three tastes and textures that chased each other round Alan's tongue.

"I like it. What is it?"

"Wine from Antares XIII. I bought it for a hundred credits a bottle last year. Still have three bottles left, too. I go easy on it; the next ship from Antares XIII won't be in for fourteen more years."

The drink made Alan mellow and relaxed. They talked a while, and he hardly noticed the fact that the time was getting along toward 0300 now, long past his shiptime bunk-hour. He didn't care. He listened to every word Hawkes had to say, drinking it in with the same delight he felt when drinking the Antarean wine. Hawkes was a complex, many-faceted character; he seemed to have been everywhere on Earth, done everything the planet had to offer. And yet there was no boastfulness in his tone as he spoke of his exploits; he was simply stating facts.

Apparently his income from gambling was staggering; he averaged nearly a thousand credits a night, night in and night out. But a note of plaintiveness crept into his voice: success was boring him, he had no further goals to shoot for. He stood at the top of his profession, and there were no new worlds for him to conquer. He had seen and done everything, and lamented it.

"I'd like to go to space someday," he remarked. "But of course that's out. I wouldn't want to rip myself away from the year 3876 forever. You don't know what I'd give to see the suns come up over Alibiro V, or to watch the thousand moons of Capella XVI. But I can't do it." He shook his head gravely. "Well, I better not dream. I like Earth and I like the sort of life I lead. And I'm glad I ran into you, too--we'll make a good team, you and me, Donnell."

Alan had been lulled by the sound of Hawkes' voice—but he snapped to attention now, surprised. "Team? What are you talking about?"

"I'll take you on as my protege. Make a decent gambler out of you. Set you up. We can go travelling together, see the world again. You've been to space; you can tell me what it's like out there. And----"

"Hold on," Alan said sharply. "You've got things mixed up a little bit. I'm going to Procyon on the Valhalla at the end of this week. I appreciate everything you've done for me, but if you think I'm going to jump ship permanently and spend the rest of my life----"

"You'll stay on Earth, all right," Hawkes said confidently. "You're in love with the place. You know yourself you don't want to spend the next seven decades of your life shuttling around in your old man's starship. You'll check out and stay here. I know you will."

"I'll bet you I don't!"

"That bet is herewith covered," Hawkes drawled. "I never pass up a sure thing. Is ten to one okay--your hundred against my thousand that you'll stay?"

Alan scowled angrily. "I don't want to bet with you, Max. I'm going back on the Valhalla. I----"

"Go ahead. Take my money, if you're so sure."

"All right, I will! A thousand credits won't hurt me!" Suddenly he had no further desire to listen to Hawkes talk; he rose abruptly and gulped down the remainder of his drink.

"I'm tired. Let's get some sleep."

"Fair enough," Hawkes said. He got up, touched a button in the wall, and a panel slid back, exposing a bed. "You sack out here. I'll wake you in the morning and we'll go looking for your brother Steve."

Chapter Ten

Alan woke early the next morning, but it was Rat, not Hawkes, who pulled him out of sleep. The little extra-terrestrial was nibbling on his ear.

Bleary-eyed, Alan sat up and blinked. "Oh--it's you. I thought you were on a silence strike."

"There wasn't anything I wanted to say, so I kept quiet. But I want to say some things now, before your new friend wakes up."

The Bellatrician had been silent all the past evening, tagging along behind Alan and Hawkes like a faithful pet, but keeping his mouth closed. "Go ahead and say them, then," Alan told him.

"I don't like this fellow Hawkes. I think you're in for trouble if you stick with him."

"He's going to take me to the Atlas to get Steve."

"You can get to the Atlas yourself. He's given you all the help you'll need."

Alan shook his head. "I’m no baby. I can take care of myself, without your help."

The little alien creature shrugged. "Suit yourself. But I’ll tell you one thing, Alan: I’m going back to the Valhalla, whether you are or not. I don’t like Earth, or Hawkes either. Remember that."

"Who said I was staying here? Didn’t you hear me bet Max that I’d go back?"

"I heard you. I say you’re going to lose that bet. I say this Hawkes is going to fast-talk you into staying here—and if I had any need for money I’d put down a side-bet on Hawkes’ side."

Alan laughed. "You think you know me better than I know myself. I never for a minute thought of jumping ship."

"Has my advice ever steered you wrong? I’m older than you are, Alan, and ten or twenty times smarter. I can see where you’re heading. And----"

Alan grew suddenly angry. "Nag, nag, nag! You’re worse than an old woman! Why don’t you keep quiet the way you did last night, and leave me alone? I know what I’m doing, and when I want your advice I’ll ask for it."

"Have it your own way," Rat said. His tone was mildly reproachful. Alan felt abashed at having scolded the little alien that way, but he did not know how to make proper amends; besides, he was annoyed at Rat’s preachiness. He and Rat had been together too long. The Bellatrician probably thought he was still only ten years old and in need of constant advice.

He rolled over and went back to sleep. About an hour later, he was awakened again, this time by Hawkes. He dressed and they ate—good real food, no synthetics, served by Hawkes’ autochef—and then set out for the Atlas Games Parlor, 68th Avenue and 423rd Street, in Upper York City. The time was 1327 when they emerged on the street. Hawkes assured him that Steve would already be at "work"; most unsuccessful gamblers started making the rounds of the parlors in early afternoon.

They took the Undertube back to the heart of the city and kept going, into the suburb of Upper York. Getting out at the 423rd Street terminal, they walked briskly through the narrow crowded streets toward 68th Avenue.

When they were a block away Alan spotted the sign, blinking on and off in watery red letters: ATLAS GAMES PARLOR. A smaller sign proclaimed the parlor’s Class C status, which allowed any mediocre player to make use of its facilities.

As they drew near Alan felt a tingle of excitement. This was what he had come to the Earther city for in the first place—to find Steve. For weeks he had been picturing the circumstances of this meeting; now it was about to take place.

The Atlas was similar to the other games parlor where Alan had had the set-to with the robohuckster; it was dark-windowed and a shining blue robot stood outside, urging passersby to step inside and try their luck. Alan moistened his dry lips; he felt cold and numb inside. He won’t be there, he thought; he won’t be there.

Hawkes took a wad of bills from his wallet. "Here’s two hundred credits for you to use at the tables while you’re looking around. I’ll have to wait outside. There’d be a royal uproar if a Class A man ever set foot inside a place like the Atlas."

Alan smiled nervously. He was pleased that Hawkes was unable to come with him; he wanted to handle the problem by himself, for a change. And he was not anxious for the gambler to witness the scene between him and Steve.

If Steve were inside, that is.

He nodded tightly and walked toward the door. The robohuckster outside chattered at him, "Come right on, sir, step inside. Five credits can get you a hundred here. Right this way."

"I’m going," Alan said. He passed through the photobeam and into the games parlor. Another robot came sliding up to him and scanned his features.

"This is a Class C establishment, sir. If your card is any higher than Class C you cannot compete here. Would you mind showing me your card, sir?"

"I don’t have any. I’m an unrated beginner." That was what Hawkes had told him to say. "I’d like a single table, please."

He was shown to a table to the left of the croupier’s booth. The Atlas was a good bit dingier than the Class A parlor he had been in the night before; its electroluminescent light-panels fizzed and sputtered, casting uncertain shadows here and there. A round was in progress; figures were bent busily over their boards, altering their computations and changing their light-patterns.

Alan slid a five-credit piece into the slot and, while waiting for the round to finish and the next to begin, looked around at his fellow patrons. In the semi-dark that prevailed it was difficult to make out faces. He would have trouble recognizing Steve.

A musky odor hung low over the hall, sweet, pungent, yet somehow unpleasant. He realized he had experienced that odor before, and tried to remember—yes. Last night in the other games parlor he had smelled a wisp
of the fragrance, and Hawkes had told him it was a narcotic cigarette. It lay heavy in the stale air of the Class C parlor.

Patrons stared with fanatic intensity at the racing pattern of lights before them. Alan glanced from one to the next. A baldhead whose dome glinted bright gold in the dusk knotted his hands together in an anguish of indecision. A slim, dreamy-eyed young man gripped the sides of the table frenziedly as the numbers spiralled upward. A fat woman in her late forties, hopelessly dazed by the intricate game, slumped wearily in her seat.

Beyond that he could not see. There were other patrons on the far side of the rostrum; perhaps Steve was over there. But it was forbidden for anyone to wander through the rows of tables searching for a particular player.

The gong rang, ending the round. "Number 322 wins a hundred credits," barked the croupier.

The man at Table 322 shambled forward for his money. He walked with a twisted shuffle; his body shook palsiedly. Hawkes had warned him of these, too--the dreamdust addicts, who in the late stages of their addiction became hollow shells of men, barely able to walk. He took his hundred credits and returned to his table without smiling. Alan shuddered and looked away. Earth was not a pretty world. Life was good if you had the stream running with you, as Hawkes did--but for each successful one like Hawkes, how many fought unsuccessfully against the current and were swept away into dreamdust or worse?

Steve. He looked down the row for Steve.

And then the board lit up again, and for the first time he was playing.

He set up a tentative pattern; golden streaks flitted across the board, mingling with red and blue blinkers. Then the first number came. Alan integrated it hastily and realized he had constructed a totally worthless pattern; he wiped his board clean and set up new figures, based on the one number he had. Already, he knew, he was hopelessly far behind the others.

But he kept with it as the minutes crawled past. Sweat dribbled down his face and neck. He had none of Hawkes' easy confidence with the board's controls; this game was hard work for a beginner. Later, perhaps, some of the steps would become automatic, but now----

"Seventy-eight sub twelve over thirteen," came the droning instructions, and Alan pulled levers and twisted ratchets to keep his pattern true. He saw the attraction the game held for the people of Earth: it required such deep concentration, such careful attention, that one had no time to ponder other problems. It was impossible to think and compete at the same time. The game offered perfect escape from the harsh realities of Earther existence.

"Six hundred twelve sigma five."

Again Alan recompensated. His nerves tingled; he felt he must be close to victory. All thought of what he had come here for slipped away; Steve was forgotten. Only the flashing board counted, only the game.

Five more numbers went by. Suddenly the gong rang, indicating that someone had achieved a winning pattern, and it was like the fall of a headsman's axe to Alan. He had lost. That was all he could think of. He had lost.

The winner was the dreamy-eyed youth at Table 166, who accepted his winnings without a word and took his seat. As Alan drew out another five-credit piece for the next round, he realized what he was doing.

He was being caught up in the nerve-stretching excitement of the game. He was forgetting Steve, forgetting the waiting Hawkes outside.

He stretched back in his seat and peered as far down the row as he could see. No sign of Steve there; he had to be on the other side of the croupier. Alan decided to do his best to win; that way he could advance to the rostrum and scan the other half of the hall.

But the game fled by too quickly; he made a false computation on the eleventh number and watched in dismay as his pattern drew further and further away from the numbers being called off. He drove himself furiously, trying to make amends, but it was impossible. The winner was the man at Table 217, on the other side. He was a lantern-jawed giant with the powerful frame of a longshoreman, and he laughed in pleasure as he collected his money.

Three more rounds went by; Alan picked up increasing skill at the game, but failed to win. He saw his shortcoming, but could not do anything to help it: he was unable to extrapolate ahead. Hawkes was gifted with the knack of being able to extend probable patterns two or three moves into the future; Alan could only work with the given, and so he never made the swift series of guesses which led to victory. He had spent nearly an hour in the parlor now, fruitlessly.

The next round came and went. "Table 111 takes us for a hundred fifty credits," came the croupier's cry. Alan relaxed, waiting for the lucky winner to collect and for the next round to begin.

The winner reached the centrally located rostrum. Alan looked at him. He was tall, fairly young--in his thirties, perhaps--with stooped shoulders and a dull glazedness about his eyes. He looked familiar.

Steve.

Feeling no excitement now that the quest had reached success, Alan slipped from his seat and made his way around the croupier's rostrum and down the far aisle. Steve had already taken his seat at Table 111. Alan came up
behind him, just as the gong sounded to signal the new round.

Steve was hunched over the board, calculating with almost desperate fury. Alan touched his shoulder.

"Steve?"

Without looking up Steve snapped, "Get out of here, whoever you are! Can't you see I'm busy?"

"Steve, I----"

A robot sidled up to Alan and grasped him firmly by the arm. "It is forbidden to disturb the players while they are engaged in the game. We will have to eject you from this parlor."

Angry Alan broke loose from the robot's grasp and leaned over Steve. He shook him by the shoulder, roughly, trying to shake loose his mind from the flickering games board.

"Steve, look up! It's me--Alan--your brother!"

Steve slapped at Alan's hand as he would at a fly. Alan saw other robots converging on him from various points in the room. In a minute they'd hurl him out into the street.

Recklessly he grabbed Steve by the shoulders and spun him around in his seat. A curse tumbled from Steve's lips; then he fell strangely silent.

"You remember me, Steve? Your brother Alan. Your twin brother, once."

Steve had changed, certainly. His hair was no longer thick and curly; it seemed to have straightened out, and darkened a little. Wrinkles seamed his forehead; his eyes were deep-set and surrounded by lines. He was slightly overweight, and it showed. He looked terribly tired. Looking at him was like looking at a comic mirror that distorted and altered your features. But there was nothing comic about Steve's appearance.

In a hoarse whisper he said, "Alan?"

"Yes."

Alan felt robot arms grasping him firmly. He struggled to break loose, and saw Steve trying to say something, only no words were coming. Steve was very pale.

"Let go of him!" Steve said finally, "He--he wasn't disturbing me."

"He must be ejected. It is the rule."

Conflict traced deep lines on Steve's face. "All right, then. We'll both leave."

The robots released Alan, who rubbed his arms ruefully. Together they walked up the aisle and out into the street.

Hawkes stood waiting there.

"I see you've found him. It took long enough."

"M-Max, this is my brother, Steven Donnell." Alan's voice was shaky with tension. "Steve, this is a friend of mine. Max Hawkes."

"You don't need to tell me who he is," Steve said. His voice was deeper and harsher than Alan remembered it. "Every gamesman knows Hawkes. He's the best there is." In the warm daylight, Steve looked even older than the twenty-six years that was his chronological age. To Alan's eyes he seemed to be a man who had been kicked around by life, a man who had not yet given up but who knew he didn't stand much of a chance for the future. And he looked ashamed. The old sparkle was gone from his brother's eyes. Quietly Steve said, "Okay, Alan. You tracked me down. Call me whatever names you want to call me and let me get about my business. I don't do quite as well as your friend Hawkes, and I happen to be in need of a lot of cash in a hurry."

"I didn't come to call you names. Let's go someplace where we can talk," Alan said. "There's a lot for us to talk about."

Chapter Eleven

They adjourned to a small tavern three doors down 68th Avenue from the games parlor, an old-fashioned tavern with manually operated doors and stuffed moose heads over the bar. Alan and Hawkes took seats next to each other in a booth in back; Steve sat facing them.

The barkeep came scuttling out--no robot in here, just a tired-faced old man--and took their orders. Hawkes called for beer, Steve for whiskey; Alan did not order.

He sat staring at his brother's oddly changed face. Steve was twenty-six. From Alan's seventeen-year-old vantage-point, that seemed tremendously old, well past the prime of life.

He said, "The Valhalla landed on Earth a few days ago. We're bound out for Procyon in a few days."

"So?"

"The Captain would like to see you again, Steve."

Steve stared moodily at his drink without speaking, for a long moment. Alan studied him. Less than two months had passed for Alan since Steve had jumped ship; he still remembered how his twin had looked. There had been something smouldering in Steve's eyes then, a kind of rebellious fire, a smoky passion. That was gone now. It had burned out long ago. In its place Alan saw only tiny red veins--the bloodshot eyes of a man who had been
through a lot, little of it very pleasant.

"Is that the truth?" Steve asked. "Would he like to see me? Or wouldn't he just prefer to think I never was born at all?"

"No."

"I know the Captain--Dad--pretty well. Even though I haven't seen him in nine years. He'd never forgive me for jumping ship. I don't want to pay any visits to the Valhalla, Alan."

"Who said anything about visiting?"

"Then what were you talking about?"

"I was talking about going back into the Crew," Alan said quietly.

The words seemed to strike Steve like physical blows. He shuddered a little and gulped down the drink he held clutched in tobacco-stained fingers. He looked up at Alan, finally.

"I can't. It's impossible. Flatly impossible."

"But----"

Alan felt Hawkes' foot kick him sharply under the table. He caught the hint, and changed the subject. There was time to return to it later.

"Okay, let's skip it for now. Why don't you tell me about your life on Earth these last nine years?"

Steve smiled sardonically. "There's not much to tell, and what there is is a pretty dull story. I came across the bridge from the Enclave last time the Valhalla was in town, and came over into York City all set to conquer the world, become rich and famous, and live happily ever after. Five minutes after I set foot on the Earther side of the river I was beaten up and robbed by a gang of roving kids. It was a real fine start."

He signalled the waiter for another drink. "I guess I must have drifted around the city for two weeks or more before the police found me and picked me up for vagrancy. By that time the Valhalla had long since hoisted for Alpha C--and didn't I wish I was on it! Every night I used to dream I had gone back on the ship. But when I woke up I always found out I hadn't."

"The police gave me an education in the ways of Earther life, complete with rubber hoses and stingrays, and when they were through with me I knew all about the system of work cards and free status. I didn't have a credit to my name. So I drifted some more. Then I got sick of drifting and tried to find a job, but of course I couldn't buy my way in to any of the hereditary guilds. Earth has enough people of her own; she's not interested in finding jobs for kid spacemen who jump ship."

"So I starved a little. Then I got tired of starving. So about a year after I first jumped ship I borrowed a thousand credits from somebody foolish enough to lend them, and set myself up as a professional gambler on Free Status. It was the only trade I could find that didn't have any entrance requirements."

"Did you do well?"

"Yeah. Very well. At the end of my first six months I was fifteen hundred credits in debt. Then my luck changed; I won three thousand credits in a single month and got shifted up to Class B." Steve laughed bitterly. "That was beautiful, up there. Inside of two more months I'd not only lost my three thousand, I was two thousand more in hock. And that's why it's been going ever since. I borrow here, win a little to pay him back, or lose a little and borrow from someone else, win a little, lose a little--round and round and round. A swell life, Alan. And I still dream about the Valhalla once or twice a week."

Steve's voice was leaden, dreary. Alan felt a surge of pity. The swashbuckling, energetic Steve he had known might still be there, inside this man somewhere, but surrounding him were the scars of nine bitter years on Earth.

Nine years. It was a tremendous gulf.

Alan caught his breath a moment. "If you had the chance to go back into the Crew, no strings attached, no recriminations--would you take it?"

For an instant the old brightness returned to Steve's eyes. "Of course I would! But----"

"But what?"

"I owe seven thousand credits," Steve said. "And it keeps getting worse. That pot I won today, just before you came over to me, that was the first take I'd had in three days. Nine years and I'm still a Class C gambler. We can't all be as good as Hawkes here. I'm lousy--but what other profession could I go into, on an overcrowded and hostile world like this one?"

Seven thousand credits, Alan thought. It was a week's earnings for Hawkes--but Steve would probably be in debt the rest of his life.

"Who do you owe this money to?" Hawkes asked suddenly.

Steve looked at him. "The Bryson syndicate, mostly. And Lorne Hollis. The Bryson people keep a good eye on me, too. There's a Bryson man three booths up who follows me around. If they ever saw me going near the spacefield they'd be pretty sure to cut me off and ask for their money. You can't welsh on Bryson."
"Suppose it was arranged that your debts be cancelled," Hawkes said speculatively.
Steve shook his head. "No. I don't want charity. I know you're a Class A and seven thousand credits comes easy to you, but I couldn't take it. Skip it. I'm stuck here on Earth for keeps, and I'm resigned to it. I made my choice, and this is what I got."

"Listen to reason," Alan urged. "Hawkes will take care of the money you owe. And Dad will be so happy to see you come back to the ship again----"

"Like Mars he'll be happy! See me come back, beaten up and ragged, a washed-out old man at twenty-six? No, sir. The Captain blotted me out of his mind a long time ago, and he and I don't have any further business together."

"You're wrong, Steve. He sent me into the Earther city deliberately to find you. He said to me, 'Find Steve and urge him to come back to the ship.' He's forgiven you completely," Alan lied. "Everyone's anxious to have you come back on board."

For a moment Steve sat silent, indecisive, frowning deeply. Then he made up his mind. He shook his head. "No--both of you. Thanks, but I don't want any. Keep your seven thousand, Hawkes. And you, Alan--go back to the ship and forget all about me. I don't even deserve a second chance."

"You're wrong!" Alan started to protest, but a second time Hawkes kicked him hard, and he shut up. He stared curiously at the gambler.

"I guess that about settles it," Hawkes observed. "If the man wants to stay, we can't force him."

Steve nodded. "I have to stay on Earth. And now I'd better get back to the games parlor--I can't waste any time, you know. Not with a seven thousand credit backlog to make up."

"Naturally. But there's time for one more drink, isn't there? On me. Maybe you don't want my money, but let me buy you a drink."

Steve grinned. "Fair enough."

He started to wave to the bartender, but Hawkes shot out an arm quickly and blocked off the gesture. "He's an old man and he's tired. I'll go to the bar and order." And before Steve could protest, Hawkes had slipped smoothly out of the booth and was on his way forward to the bar.

Alan sat facing his brother. He felt pity. Steve had been through a lot; the freedom he had longed for aboard ship had had a heavy price. And was it freedom, to sit in a crowded games parlor on a dirty little planet and struggle to get out of debt?

There was nothing further he could say to Steve. He had tried, and he had failed, and Steve would remain on Earth. But it seemed wrong. Steve did deserve a second chance. He had jumped ship and it had been a mistake, but there was no reason why he could not return to his old life, wiser for the experience. Still, if he refused----

Hawkes came back bearing two drinks--another beer for himself and a whiskey for Steve. He set them out on the table and said, "Well, drink up. Here's hoping you make Class A and stay there."

"Thanks," Steve said, and drained his drink in a single loud gulp. His eyes widened; he started to say something, but never got the words out. He slumped down in his seat and his chin thumped ringingly against the table.

Alan looked at Hawkes in alarm. "What happened to him? Why'd he pass out?"

Hawkes smiled knowingly. "An ancient Earth beverage known as the Mickey Finn. Two drops of a synthetic enzyme in his drink; tasteless, but extremely effective. He'll be asleep for ten hours or more."

"How'd you arrange it?"

"I told the bartender it was in a good cause, and he believed me. You wait here, now. I want to talk to that Bryson man about your brother's debts, and then we'll spirit him out to the spaceport and dump him aboard the Valhalla before he wakes up."

Alan grinned. He was going to have to do some explaining to Steve later, but by that time it would be too late; the starship would be well on its way to Procyon. It was a dirty trick to play, he thought, but it was justifiable. In Hawkes' words, it was in a good cause.

Alan put his arms around his brother's shoulders and gently lifted him out of the chair; Steve was surprisingly light, for all his lack of condition. Evidently muscle weighed more than fat, and Steve had gone to fat. Supporting his brother's bulk without much trouble, Alan made his way toward the entrance to the bar. As he went past the bartender, the old man smiled at him. Alan wondered what Hawkes had said to him.

Right now Hawkes was three booths up, leaning over and taking part in an urgent whispered conference with a thin dark-faced man in a sharply tailored suit. They reached some sort of agreement; there was a handshake. Then Hawkes left the booth and slung one of Steve's dangling arms around his own shoulder, easing the weight.

"There's an Undertube that takes us as far as Carhill Boulevard and the bridge," Hawkes said. "We can get a ground vehicle there that'll go on through the Enclave and out to the spacefield."

The trip took nearly an hour. Steve sat propped up between Alan and Hawkes, and every now and then his head
would loll to one side or another, and he would seem to be stirring; but he never woke. The sight of two men
dragging a third along between them attracted not the slightest attention as they left the Undertube and climbed
aboard the spacefield bus. Apparently in York City no one cared much about what went on; it made no difference to
the busy Earthers whether Steve were unconscious or dead.

The ground bus took them over the majestic arch of the bridge, rapidly through the sleepy Enclave—Alan saw
nobody he recognized in the streets—and through the restricted area that led to the spacefield.

The spaceport was a jungle of ships, each standing on its tail waiting to blast off. Most of them were small two-
man cargo vessels, used in travel between Earth and the colonies on the Moon, Mars, and Pluto, but here and there a
giant starship loomed high above the others. Alan stood on tiptoes to search for the golden hull of the Valhalla, but
he was unable to see it. Since the starship would be blasting off at the end of the week, he knew the crew was
probably already at work on it, shaping it up for the trip. He belonged on it too.

He saw a dark green starship standing nearby; the Encounter, Kevin Quantrell's ship. Men were moving about
busily near the big ship, and Alan remembered that it had become obsolete during its last long voyage, and was
being rebuilt.

A robot came sliding up to the three of them as they stood there at the edge of the landing field.

"Can I help you, please?"

"I'm from the starship Valhalla," Alan said. "I'm returning to the ship. Would you take me to the ship, please?"

"Of course."

Alan turned to Hawkes. The moment had come, much too suddenly. Alan felt Rat twitching at his cuff, as if
reminding him of something.

Grinning awkwardly, Alan said, "I guess this is the end of the line, Max. You'd better not go out on the
spacefield with us. I—I sort of want to thank you for all the help you've given me. I never would have found Steve
without you. And about the bet we made—well, it looks like I'm going back on my ship after all, so I've won a
thousand credits from you. But I can't ask for it, of course. Not after what you did for Steve."

He extended his hand. Hawkes took it, but he was smiling strangely.

"If I owed you the money, I'd pay it to you," the gambler said. "That's the way I work. The seven thousand I
paid for Steve is extra and above everything else. But you haven't won that bet yet. You haven't won it until the
Valhalla's in space with you aboard it."

The robot made signs of impatience. Hawkes said, "You'd better convoy your brother across the field and dump
him on his ship. Save the goodbyes for later. I'll wait right here for you. Right here."

Alan shook his head. "Sorry, Max, but you're wasting your time by waiting. The Valhalla has to be readied for
blastoff, and once I check in aboard ship I can't come back to visit. So this is goodbye, right here."

"We'll see about that," Hawkes said. "Ten to one odds."

"Ten to one," Alan said. "And you've lost your bet." But his voice did not sound very convincing, and as he
started off across the field with Steve dragging along beside him he frowned, and did some very intense thinking
indeed in the few minutes' time it took him to arrive at the shining Valhalla. He was beginning to suspect that
Hawkes might be going to win the bet after all.

Chapter Twelve

He felt a little emotional pang, something like nostalgia, as the Valhalla came into sight, standing by itself tall
and proud at the far end of the field. A cluster of trucks buzzed around it, transferring fuel, bringing cargo. He
spotted the wiry figure of Dan Kelleher, the cargo chief, supervising and shouting salty instructions to the perspiring
men.

Alan tightened his grip on Steve's arm and moved forward. Kelleher shouted, "You men back there, tighten up
on that winch and give 'er a hoist! Tighten up, I say! Put some muscle into-----" He broke off. "Alan," he said, in a
quiet voice.

"Hello, Dan. Is my father around?"

Kelleher was staring with frank curiosity at the slumped figure of Steve Donnell. "The Captain's off watch now.
Art Kandin's in charge."

"Thanks," Alan said. "I'd better go see him."

"Sure. And-----"

Alan nodded. "Yes. That's Steve."

He passed between the cargo hoists and clambered onto the escalator rampway that led to the main body of the
ship. It rose, conveying him seventy feet upward and through the open passenger hatch to the inner section of the
towering starship.

He was weary from having carried Steve so long. He put the sleeping form down against a window-seat facing
one of the viewscreens, and said to Rat, "You stay here and keep watch. If anyone wants to know who he is, tell
him the truth."

"Right enough."

Alan found Art Kandin where he expected to find him—in the Central Control Room, posting work assignments
for the blastoff tomorrow. The lanky, pudgy-faced First Officer hardly noticed as Alan stepped up beside him.

"Art?"

Kandin turned—and went pale. "Oh--Alan. Where in blazes have you been the last two days?"

"Out in the Earther city. Did my father make much of a fuss?"

The First Officer shook his head. "He kept saying you just went out to see the sights, that you hadn't really
jumped ship. But he kept saying it over and over again, as if he didn't really believe it, as if he wanted to convince
himself you were coming back."

"Where is he now?"

"In his cabin. He's off-watch for the next hour or two. I'll ring him up and have him come down here, I guess." Alan shook his head. "He kept saying you just went out to see the sights, that you hadn't really
jumped ship. But he kept saying it over and over again, as if he didn't really believe it, as if he wanted to convince
himself you were coming back."

"Where is he now?"

Alan made his way back to the viewscreen. Rat looked up at him; he was sitting perched on Steve's shoulder.

"Anyone bother you?" Alan asked.

"No one's come by this way since you left," Rat said.

"Alan?" a quiet voice said.

Alan turned. "Hello, Dad."

The Captain's lean, tough face had some new lines on it; his eyes were darkly shadowed, and he looked as if he
hadn't slept much the night before. But he took Alan's hand and squeezed it warmly—in a fatherly way, not a
Captainly one. Then he glanced at the sleeping form behind Alan.

"I--went into the city, Dad. And found Steve."

Something that looked like pain came into Captain Donnell's eyes, but only for an instant. He smiled. "It's
strange, seeing the two of you like this. So you brought back Steve, eh? We'll have to put him back on the roster.
Why is he asleep? He looks like he's out cold."

"He is. It's a long story, Dad."

"You'll have to explain it to me later, then--after blastoff."

Alan shook his head. "No, Dad. Steve can explain it when he wakes up, tonight. Steve can tell you lots of
things. I'm going back to the city."

"What?"

It was easy to say, now—the decision that had been taking vague form for several hours, and which had
crystallized as he trudged across the spacefield toward the Valhalla. "I brought you back Steve, Dad. You still have
one son aboard ship. I want off. I'm resigning. I want to stay behind on Earth. By our charter you can't deny such a
request."

Captain Donnell moistened his lips slowly. "Agreed, I can't deny. But why, Alan?"

"I think I can do more Earthside. I want to look for Cavour's old notebooks; I think he developed the
hyperdrive, and if I stay behind on Earth maybe I can find it. Or else I can build my own. So long, Dad. And tell
Steve that I wish him luck—and that he'd better do the same for me." He glanced at Rat. "Rat, I'm deeding you to
Steve. Maybe if he had had you instead of me, he never would have jumped ship in the first place."

He looked around, at his father, at Steve, at Rat. There was not much else he could say. And he knew that if he
prolonged the farewell scene too long, he'd only be burdening his father and himself with the weight of sentimental
memory.

"We won't be back from Procyon for almost twenty years, Alan. You'll be thirty-seven before we return to
Earth again."

Alan grinned. "I have a hunch I'll be seeing you all before then, Dad. I hope. Give everyone my best. So long,
Dad."

"So long, Alan."

He turned away and rapidly descended the ramp. Avoiding Kelleher and the cargo crew, for goodbyes would
take too long, he trotted smoothly over the spacefield, feeling curiously lighthearted now. Part of the quest was over;
Steve was back on board the Valhalla. But Alan knew the real work was just beginning. He would search for the
hyperdrive; perhaps Hawkes would help him. Maybe he would succeed in his quest this time, too. He had some
further plans, in that event, but it was not time to think of them now.

Hawkes was still standing at the edge of the field, and there was a thoughtful smile on his face as Alan came
running up to him.

"I guess you won your bet," Alan said, when he had his breath back.
"I almost always do. You owe me a hundred credits--but I'll defer collection."

They made the trip back to York City in virtual silence. Either Hawkes was being too tactful to ask the reasons for Alan's decision or else--this seemed more likely, Alan decided--the gambler had already made some shrewd surmises, and was waiting for time to bear him out. Hawkes had known long before Alan himself realized it that he would not leave with the Valhalla.

The Cavour Hyperdrive, that was the rainbow's end Alan would chase now. He would accept Hawkes' offer, become the gambler's protege, learn a few thing about life. The experience would not hurt him. And always in the front of his mind he would keep the ultimate goal, of finding a spacedrive that would propel a ship faster than the speed of light.

At the apartment in Hasbrouck, Hawkes offered him a drink. "To celebrate our partnership," he explained. Alan accepted the drink and tossed it down. It stung, momentarily; he saw sadly he was never going to make much of a drinking man. He drew something from his pocket, and Hawkes frowned.

"What's that?"

"My Tally. Every spaceman has one. It's the only way we can keep track of our chronological ages when we're on board ship." He showed it to Hawkes; it read Year 17 Day 3. "Every twenty-four hours of subjective time that goes by, we click off another day. Every three hundred sixty-five days another year is ticked off. But I guess I won't be needing this any more."

He tossed it in the disposal unit. "I'm an Earther now. Every day that goes by is just one day; objective time and subjective time are equal."

Hawkes grinned cheerfully. "A little plastic doodad to tell you how old you are, eh? Well, that's all behind you now." He pointed to a button in the wall. "There's the operating control for your bed; I'll sleep in back, where I did last night. First thing tomorrow we'll get you a decent set of clothes, so you can walk down the street without having people yell 'Spacer!' at you. Then I want you to meet a few people--friends of mine. And then we start breaking you in at the Class C tables."

The first few days of life with Hawkes were exciting ones. The gambler bought Alan new clothing, modern stuff with self-sealing zippers and pressure buttons, made of filmy clinging materials that were incredibly more comfortable than the rough cloth of his Valhalla uniform. York City seemed less strange to him with each passing hour; he studied Undertube routes and Overshoot maps until he knew his way around the city fairly well.

Each night about 1800 they would eat, and then it was time to go to work. Hawkes' routine brought him to three different Class A gambling parlors, twice each week; on the seventh day he always rested. For the first week Alan followed Hawkes around, standing behind him and observing his technique. When the second week began, Alan was on his own, and he began to frequent Class C places near the A parlors Hawkes used.

But when he asked Hawkes whether he should take out a Free Status registration, the gambler replied with a quick, snappish, "Not yet."

"But why? I'm a professional gambler, since last week. Why shouldn't I register?"

"Because you don't need to. It's not required."

"But I want to. Gosh, Max, I--well, I sort of want to put my name down on something. Just to show I belong here on Earth. I want to register."

Hawkes looked at him strangely, and it seemed to Alan there was menace in the calm blue eyes. In suddenly ominous tones he said, "I don't want you signing your name to anything, Alan. Or registering for Free Status. Got that?"

"Yes, but----"

"No buts! Got it?"

Repressing his anger, Alan nodded. He was used to taking orders from his shipboard superiors and obeying them. Hawkes probably knew best. In any case, he was dependent on the older man right now, and did not want to anger him unnecessarily. Hawkes was wealthy; it might take money to build a hyperdrive ship, when the time came. Alan was flatly cold-blooded about it, and the concept surprised and amused him when he realized just how single-minded he had become since resigning from the Valhalla.

He turned the single-mindedness to good use at the gaming tables first. During his initial ten days as a professional, he succeeded in losing seven hundred credits of Hawkes' money, even though he did manage to win a three-hundred-credit stake one evening.

But Hawkes was not worried. "You'll make the grade, Alan. A few more weeks, days maybe, while you learn the combinations, limber up your fingers, pick up the knack of thinking fast--you'll get there."

"I'm glad you're so optimistic." Alan felt downcast. He had dropped three hundred credits that evening, and it seemed to him that his fumbling fingers would never learn to set up the combinations fast enough. He was just like
Steve, a born loser, without the knack the game required. "Oh, well, it's your money."

"And I expect you to double it for me some day. I've got a five-to-one bet out now that you'll make Class B before fall."

Alan snorted doubtfully. In order to make Class B, he would have to make average winnings of two hundred credits a night for ten days running, or else win three thousand credits within a month. It seemed a hopeless task.

But, as usual, Hawkes won the bet. Alan's luck improved as May passed and June dwindled; at the beginning of July he hit a hot streak when he seemed to be marching up to the winner's rostrum every other round, and the other Class C patrons began to grumble. The night he came home with six hundred newly-won credits, Hawkes opened a drawer and took out a slim, sleek neutrino gun.

"You'd better carry this with you from now on," the gambler said.

"What for?"

"They're starting to notice you now. I hear people talking. They know you're carrying cash out of the game parlors every night."

Alan held the cool gray weapon, whose muzzle could spit a deadly stream of energized neutrinos, undetectable, massless, and fatal. "If I'm held up I'm supposed to use this?"

"Just the first time," Hawkes said. "If you do the job right, you won't need to use it any more. There won't be any second time."

As it turned out, Alan had no need for the gun, but he carried it within easy reach whenever he left the apartment. His skill at the game continued to increase; it was, he saw, just like astrogation, and with growing confidence he learned to project his moves three and sometimes four numbers ahead.

On a warm night in mid-July the proprietor of the games hall Alan frequented most regularly stopped him as he entered.

"You're Donnell, aren't you?"

"That's right. Anything wrong?"

"Nothing much, except that I've been tallying up your take the past two weeks. Comes to close to three thousand credits, altogether. Which means you're not welcome around this parlor any more. Nothing personal, son. You'd better carry this with you next time out."

Alan took the little card the proprietor offered him. It was made of gray plastic, and imprinted on it in yellow were the letters, CLASS B. He had been promoted.

Chapter Thirteen

Things were not quite so easy in the Class B games parlors. Competition was rough. Some of the players were, like Alan, sharp newcomers just up from the bottom of the heap; others were former Class A men who were sliding down again, but still did well enough to hang on in Class B. Every day, some of the familiar faces were gone, as one man after another failed to meet the continuing qualifications for the intermediary class.

Alan won fairly steadily--and Hawkes, of course, was a consistent winner on the Class A level. Alan turned his winnings over to the older man, who then allowed him to draw any cash he might need without question.

The summer rolled on through August--hot and sticky, despite the best efforts of the local weather-adjustment bureau. The cloud-seeders provided a cooling rain-shower at about 0100 every night to wash away the day's grime. Alan was usually coming home at that time, and he would stand in the empty streets letting the rain pelt down on him, and enjoying it. Rain was a novelty for him; he had spent so much of his life aboard the starship that he had had little experience with it. He was looking forward to the coming of winter, and with it snow.

He hardly ever thought of the Valhalla. He disciplined himself to keep thoughts of the starship out of his mind, for he knew that once he began regretting his decision there would be no stopping. Life on Earth was endlessly fascinating; and he was confident that someday soon he would get a chance to begin tracking down the Cavour hyperdrive.

Hawkes taught him many things--how to wrestle, how to cheat at cards, how to throw knives. None of the things Alan learned from Hawkes were proper parts of the education of a virtuous young man--but on Earth, virtue was a negative accomplishment. You were either quick or dead. And until he had an opportunity to start work on the hyperdrive, Alan knew he had better learn how to survive on Earth. Hawkes was a master of survival techniques; Alan was a good student.

He had his first test on a muggy night early in September. He had spent his evening at the Lido, a flossy games parlor in the suburb of Ridgewood, and had come away with better than seven hundred credits--the second best single night he had ever had. He felt good about things. Hawkes was working at a parlor far across the city, and so they did not arrange to meet when the evening was over; instead, they planned to come home separately. Usually they talked for an hour or two each night before turning in, Alan reviewing his evening's work and having Hawkes pick out the weak points in his technique and show him the mistakes he had made.
Alan reached Hasbrouck about 0030 that evening. There was no moon; and in Hasbrouck the street-lighting was not as efficient as it was in more respectable areas of York City. The streets were dark. Alan was perspiring heavily from the humidity. But the faint hum of the cloud-seeders' helicopters could be heard; the evening rain was on the way. He decided to wait outside a while.

The first drops splashed down at 0045. Alan grinned gleefully as the cool rain washed away the sweat that clung to him; while pedestrians scurried for cover, he gloried in the downpour.

Darkness lay all around. Alan heard sudden footsteps; a moment later he felt sharp pressure in the small of his back and a hand gripping his shoulder.

A quiet voice said, "Hand over your cash and you won't get hurt."

Alan froze just an instant. Then the months of Hawkes' training came into play. He wiggled his back tentatively to see whether the knife was penetrating his clothing. Good; it wasn't.

In one quick motion he whirled and spun away, dancing off to the left and clubbing down sharply on his opponent's knife-hand. A grunted exclamation of pain rewarded him. He stepped back two steps; as his attacker advanced, Alan drove a fist into his stomach and leaped lithely away again. This time his hand emerged holding the neutrino gun.

"Stand where you are or I'll burn you," he said quietly. The shadow-shrouded attacker made no move. Cautiously Alan kicked the fallen knife out of his reach without lowering his gun.

"Okay," Alan said. "Come on over here in the light where I can see who you are. I want to remember you."

But to his astonishment he felt strong arms slipping around his and pinioning him; a quick twist and his neutrino gun dropped from his numbed hands. The arms locked behind his back in an unbreakable full nelson.

Alan writhed, but it was no use. The hidden accomplice held him tightly. And now the other man came forward and efficiently went through his pockets. Alan felt more angry than afraid, but he wished Hawkes or someone else would come along before this thing went too far.

Suddenly Alan felt the pressure behind his neck easing up. His captor was releasing him. He poised, debating whether or not to whirl and attack, when a familiar voice said, "Rule Number One: never leave your back unguarded for more than half a second when you're being held up. You see what happens."

Alan was too stunned to reply for several moments. In a whisper he said finally, "Max?"

"Of course. And lucky for you I'm who I am, too. John, step out here in the light where he can see you. Alan, meet John Byng. Free Status, Class B."

The man who had originally attacked him came forward now, into the light of the street-glow. He was shorter than Alan, with a lean, almost fleshless face and a scragglily reddish-brown beard. He looked cadaverous. His eyeballs were stained a peculiar yellowish tinge.

Alan recognized him--a Class B man he had seen several times at various parlors. It was not a face one forgot easily.

Byng handed over the thick stack of bills he had taken from Alan. As he pocketed them, Alan said in some annoyance, "A very funny prank, Max. But suppose I had burned your friend's belly, or he had stabbed me?"

Hawkes chuckled. "One of the risks of the game, I guess. But I know you too well to think that you'd burn down an unarmed man, and John didn't intend to stab you. Besides, I was right here."

"And what was the point of this little demonstration?"

"Part of your education, m'boy. I was hoping you'd be held up by one of the local gangs, but they didn't oblige, so I had to do it myself. With John's help, of course. Next time remember that there may be an accomplice hiding in the shadows, and that you're not safe just because you've caught one man."

Alan grinned. "Good point. And I guess this is the best way to learn it."

The three of them went upstairs. Byng excused himself and vanished into the extra room almost immediately; Hawkes whispered to Alan, "Johnny's a dreamduster--a narcosephrine addict. In the early stages; you can spot it by the yellowing of the eyeballs. Later on it'll cripple him, but he doesn't worry about later on."

Alan studied the small, lean man when he returned. Byng was smiling--a strange unworlthy smile. He held a small plastic capsule in his right hand.

"Here's another facet of your education," he said. He looked at Hawkes. "Is it okay?"

Hawkes nodded.

Byng said, "Take a squint at this capsule, boy. It's dreamdust--narcosephrine. That's my kick."

He tossed the capsule nonchalantly to Alan, who caught it and held it at arm's distance as if it were a live viper. It contained a yellow powder.

"You twist the cap and sniff a little," Hawkes said. "But don't try it unless you hate yourself real bad. Johnny can testify to that."

Alan frowned. "What does the stuff do?"
"It's a stimulant--a nerve-stimulant. Enhances perception. It's made from a weed that grows only in dry, arid places--comes from Epsilon Eridani IV originally, but the galaxy's biggest plantation is in the Sahara. It's habit-forming--and expensive."

"How much of it do you have to take to--to get the habit?"

Byng's thin lips curled in a cynical scowl. "One sniff. And the drug takes all your worries away. You're nine feet tall and the world's your plaything, when you're up on dream dust. Everything you look at has six different colors." Bitterly Byng said, "Just one catch--after about a year you stop feeling the effect. But not the craving. That stays with you forever. Every night, one good sniff--at a hundred credits a sniff. And there's no cure."

Alan shuddered. He had seen dreamdust addicts in the advanced state--withered palsied old men of forty, unable to eat, crippled, drying up and nearing death. All that for a year's pleasure!

"Johnny used to be a starman," Hawkes said suddenly. "That's why I picked him for our little stunt tonight. I thought it was about time I introduced you two."

Alan's eyes widened. "What ship?"

"Galactic Queen. A dreamdust peddler came wandering through the Enclave one night and let me have a free sniff. Generous of him."

"And you--became an addict?"

"Five minutes later. So my ship left without me. That was eleven years ago, Earthtime. Figure it out--a hundred credits a night for eleven years."

Alan felt cold inside. It could have happened to him, he thought--that free sniff. Byng's thin shoulders were quivering. The advanced stage of addiction was starting to set in.

Byng was only the first of Hawkes' many friends that Alan met in the next two weeks. Hawkes was the center of a large group of men in Free Status, not all of whom knew each other but who all knew Hawkes. Alan felt a sort of pride in being the protege of such an important and widely-known man as Max Hawkes, until he started discovering what sort of people Hawkes' friends were.

There was Lorne Hollis, the loansman--one of the men Steve had borrowed from. Hollis was a chubby, almost greasy individual with flat milky gray eyes and a cold, chilling smile. Alan shook hands with him, and then felt like wiping off his hand. Hollis came to see them often.

Another frequent visitor was Mike Kovak of the Bryson Syndicate--a sharp-looking businessman type in ultra-modern suits, who spoke clearly and well and whose specialty was forgery. There was Al Webber, an amiable, soft-spoken little man who owned a fleet of small ion-drive cargo ships that plied the spacelines between Earth and Mars, and who also exported dreamdust to the colony on Pluto, where the weed could not be grown.

Seven or eight others showed up occasionally at Hawkes' apartment. Alan was introduced to them all, and then generally dropped out of the conversation, which usually consisted of reminiscences and gossip about people he did not know.

But as the days passed, one thing became evident: Hawkes might not be a criminal himself, but certainly most of his friends operated on the far side of the law. Hawkes had seen to it that they stayed away from the apartment during the first few months of Alan's Earther education; but now that the ex-starman was an accomplished gambler and fairly well skilled in self-defense, all of Hawkes' old friends were returning once again.

Day by day Alan increasingly realized how innocent and childlike a starman's life was. The Valhalla was a placid little world of 176 people, bound together by so many ties that there was rarely any conflict. Here on Earth, though, life was tough and hard.

He was lucky. He had stumbled into Hawkes early in his wanderings. With a little less luck he might have had the same sort of life Steve had had ... or John Byng. It was not fun to think about that.

Usually when Hawkes had friends visiting him late at night, Alan would sit up for a while listening, and then excuse himself and get some sleep. As he lay in bed he could hear low whispering, and once he woke toward morning and heard the conversation still going on. He strained his ears, but did not pick up anything.

One night early in October he had come home from the games parlor and, finding nobody home, had gone immediately to sleep. Some time later he heard Hawkes and his friends come in, but he was too tired to get out of bed and greet them. He rolled over and went back to sleep.

But later that night he felt hands touching him, and he opened an eye to see Hawkes bending over him. "It's me--Max. Are you awake?"

"No," Alan muttered indistinctly.

Hawkes shook him several times. "Come on--get up and put some clothes on. Some people here who want to talk to you."

Only half comprehending, Alan clambered unwillingly from bed, dressed, and splashed cold water in his face. He followed Hawkes back inside.
The living room was crowded. Seven or eight men were there—the ones Alan thought of as the inner circle of Hawkes' cronies. Johnny Byng, Mike Kovak, Al Webber, Lorne Hollis, and some others. Sleepily Alan nodded at them and took a seat, wondering why Hawkes had dragged him out of bed for this.

Hawkes looked at him sharply. "Alan, you know all these people, don't you?"

Alan nodded. He was still irritated at Hawkes; he had been sound asleep.

"You're now facing ninety per cent of what we've come to call the Hawkes Syndicate," Hawkes went on. "These eight gentlemen and myself have formed the organization recently for a certain specific purpose. More of that in a few minutes. What I got you out here to tell you was that there's room in our organization for one more man, and that you fit the necessary qualifications."

"Me?"

Hawkes smiled. "You. We've all been watching you since you came to live with me, testing you, studying you. You're adaptable, strong, intelligent. You learn fast. We had a little vote tonight, and decided to invite you in."

Alan wondered if he were still asleep or not. What was all this talk of syndicates? He looked round the circle, and realized that this bunch could be up to no good.

Hawkes said, "Tell him about it, Johnny."

Byng leaned forward and blinked his drug-stained eyes. In a quiet voice, almost a purr, he said, "It's really very simple. We're going to stage a good old-fashioned hold-up. It's a proposition that'll net us each about a million credits, even with the ten-way split. It ought to go off pretty easy but we need you in on it. As a matter of fact, I'd say you were indispensable to the project, Alan."

Chapter Fourteen

Hawkes took over, explaining the proposition to a now very much awake Alan.

"There's going to be a currency transfer at the World Reserve Bank downtown next Friday. At least ten million credits are going to be picked up by an armored truck and taken to branch banks for distribution."

"Hollis, here, happens to have found out the wave-patterns of the roboguards who'll be protecting the currency shipment. And Al Webber has some equipment that can paralyze roboguards if we know their operational wavelength. So it's a simple matter to leave the car unprotected; we wait till it's loaded, then blank out the robots, seize the human guards, and drive away with the truck."

Alan frowned thoughtfully. "Why am I so indispensable to this business?" He had no desire to rob banks or anything else.

"Because you're the only one of us who isn't registered on the central directory. You don't have any televector number. You can't be traced."

Suddenly Alan understood. "So that's why you didn't let me register! You've been grooming me for this all along!"

Hawkes nodded. "As far as Earth is concerned, you don't exist. If any of us drove off with that truck, all they need to do is plot the truck's coordinates and follow the televector patterns of the man who's driving it. Capture is inevitable that way. But if you're aboard the truck, there's no possible way of tracing your route. Get it?"

"I get it," Alan said slowly. But I don't like it, he added silently. "I want to think about the deal a little longer, though. Let me sleep on it. I'll tell you tomorrow whether I'll go through with it."

Puzzled expressions appeared on the faces of Hawkes' eight guests, and Webber started to say something, but Hawkes hastily cut him off. "The boy's a little sleepy, that's all. He needs time to get used to the idea of being a millionaire. I'll call each of you in the morning, okay?"

The eight were shepherded out of the apartment rapidly, and when they were gone Hawkes turned to face Alan. Gone now was the bland friendliness, gone the warm-hearted brotherliness of the older man. His lean face was cold and businesslike now, and his voice was harsh as he said, "What's this talk of thinking it over? Who said you had any choice about this thing?"

"Don't I have any say in my own life?" Alan asked hotly. "Suppose I don't want to be a bank robber? You didn't tell me----"

"I didn't need to. Listen, boy—I didn't bring you in here for my health. I brought you in because I saw you had the potential for this job. I've coddled you along for more than three months, now. Given you a valuable education in how to get along on this planet. Now I'm asking you to pay me back, a little. Byng told the truth: you're indispensable to this project. Your personal feelings are irrelevant just now."

"Who says?"

"I do."

Alan stared coldly at Hawkes' transformed face. "Max, I didn't bargain for a share in your bank-robbing syndicate. I don't want any part of it. Let's call it quits right now. I've turned over quite a few thousand credits of my winnings to you. Give me five hundred and keep the rest. It's your pay for my room and board and instruction the
last three months. You go your way, I'll go mine."

Hawkes laughed sharply. "Just as simple as that? I pocket your winnings and you walk out of here? How dumb do you think I am? You know the names of the syndicate, you know the plans, you know everything. A lot of people would pay big money for an advance tip on this bit." He shook his head. "I'll go my way and you'll go it too, Alan. Or else. You know what that or else means."

Angrily Alan said, "You'd kill me, too, if I backed down now. Friendship doesn't mean a thing to you. 'Help us rob this bank, or else.'"

Hawkes' expression changed again; he smiled warmly, and when he spoke his voice was almost wheedling. "Listen, Alan, we've been planning this thing for months. I put down seven thousand to clear your brother, just so I'd be sure of getting your cooperation. I tell you there's no danger. I didn't mean to threaten you--but try to see my side of it. You have to help out!"

"No. I don't. But some of them do. Johnny Byng does; and Kovak, too--he owes Bryson thirty thousand. But I organized the scheme for months. "Hawkes was pleading now. "Alan, I'm bored. Deadly bored. Gambling isn't gambling for me; I'm too good. I never lose except when I want to. So I need to get my kicks someplace else. This is it. But it won't come off without you."

They were silent for a moment. Alan realized that Hawkes and his group were desperate men; they would never let him live if he refused to cooperate. He had no choice at all. It was disillusioning to discover that Hawkes had taken him in mostly because he would be useful in a robbery.

He tried to tell himself that this was a jungle world where morality didn't matter, and that the million credits he'd gain would help finance hyperdrive research. But those were thin arguments that held no conviction. There was no justification for what he was going to do. None whatsoever.

But Hawkes held him in a cleft stick. There was no way out. He had fallen among thieves--and, willy-nilly, he would be forced to become one himself.

"All right," he said bitterly. "I'll drive the getaway truck for you. But after it's over, I'll take my share and get out. I won't want to see you again."

Hawkes seemed to look hurt, but he masked the emotion quickly enough. "That's up to you, Alan. But I'm glad you gave in. It would have been rough on both of us otherwise. Suppose we get some sleep."

Alan slept poorly during what was left of the night. He kept mulling the same thoughts round and round endlessly in his head, until he wished he could unhinge the front of his skull and let the thoughts somehow escape.

It irritated him to know that Hawkes had taken him in primarily because he fit the qualifications for a plan concocted long before, and not for his own sake. All the intensive training the gambler had given him had been directed not merely toward toughening Alan but toward preparing him for the role he would play in the projected robbery.

He felt unhappy about the robbery too. The fact that he was being coerced into taking part made him no less a criminal, and that went against all his long-ingrained codes of ethics. He would be just as guilty as Hawkes or Webber, and there was no way out.

There was no sense brooding over it, he decided finally. When it was all over he would have enough money to begin aiming for his real goal, development of a workable hyperspace drive. He would break completely with Hawkes, move to some other city perhaps. If his quest were successful, it would in some measure be an atonement for the crime he was going to commit. Only in some measure, though.

The week passed slowly, and Alan did poorly at his nightly work. His mind was anywhere but on the flashing games board, and the permutations and combinations eluded him. He lost, though not heavily.

Each night the ten members of the Syndicate met at Hawkes' apartment and planned each step of the crime in great detail, drilling and re-drilling until it was second nature for each man to recite his particular part in the robbery. Alan's was at once the simplest and most difficult; he would have nothing to do until the others had finished their parts, but then he would have to board the armored car and outrace any pursuers. He was to drive the car far outside city limits, where he would be met and relieved of the cash by Byng and Hollis; then he was to lose the truck somewhere and return to the city by public transit.

The day of the robbery dawned cold and clear; an autumn chill was in the air. Alan felt some anticipatory nervousness, but he was calmer than he expected to be--almost fatalistically calm. By nightfall, he would be a wanted criminal. He wondered whether it would be worth it, even for the million credits. Perhaps it would be best to defy Hawkes and make some sort of escape try.

But Hawkes, as always a shrewd judge of human character, seemed obviously aware that Alan was wavering. He kept a close watch over him, never allowing him to stray. Hawkes was taking no chances. He was compelling
Alan to take part in the robbery.

The currency transfer was scheduled to take place at 1240, according to the inside information that Hollis had somehow obtained. Shortly after noon, Hawkes and Alan left the apartment and boarded the Undertube, their destination the downtown section of York City where the World Reserve Bank was located.

They reached the bank about 1230. The armored truck was parked outside, looking sleek and impregnable, and four massive roboguards stood watch, one by each wheel. There were three human policemen too, but they were strictly for effect; in case of any trouble, the roboguards were expected to handle the rough work.

The bank was a mighty edifice indeed--over a hundred stories high, rising in sweeping setbacks to a point where its tapering top was lost in the shimmering noonday sky. It was, Alan knew, the center of global commerce.

Armed guards were bringing packages of currency from within the bank and were placing them on the truck. Alan's heart raced. The streets were crowded with office workers out for lunch; could he get away with it?

It was all precisely synchronized. As Hawkes and Alan strolled toward the bank, Alan caught sight of Kovak lounging across the street, reading a telefax sheet. None of the others were visible.

Webber, Alan knew, was at this moment sitting in an office overlooking the bank entrance, staring out the window at the scene below. At precisely 1240, Webber was to throw the switch on the wave-damper that would paralyze the four roboguards.

The instant the roboguards froze, the other conspirators would go into action. Jensen, McGuire, Freeman, and Smith, donning masks, would leap for the three human guards of the truck and pin them to the ground. Byng and Hawkes, who would enter the bank a moment before, would stage an impromptu fist-fight with each other just inside the main entrance, thereby creating confusion and making it difficult for reinforcement guards to get past them and into the street.

Just outside the door, Hollis and Kovak would lurk. As the quartet pounced on the truck's guards, they would sprint across and yank the driver out of the cab. Then Alan would enter quickly from the other side and drive off, while the remaining nine would vanish into the crowd in as many different directions as possible. Byng and Hollis, if they got away, would head for the rendezvous to meet Alan and take the cash from him.

If it went off properly the whole thing should take less than fifteen seconds, from the time Webber threw the switch to the time Alan drove away with the truck. If it went off properly.

The seconds crawled by. The time was 1235, now. At 1237 Hawkes and Byng sauntered into the bank from opposite directions. Three minutes to go. Alan's false calm deserted him; he pictured all sorts of possible calamities.

1238. Everyone's watch was synchronized to the second.

1239. 1239:30.

Thirty seconds to go. Alan took his position in a crowd of bystanders, as prearranged. Fifteen seconds to go. Ten. Five.

1240. The roboguards were in the act of directing the locking of the truck; the loading had been carried out precisely on schedule. The truck was shut and sealed.

The roboguards froze.

Webber had been right on time. Alan tensed, caught up in the excitement of the moment and thinking now only of the part he was to play.

The three policemen glanced at each other in some confusion. Jensen and McGuire came leaping out at them---

And the roboguards returned to life.

The sound of blaster shots was heard within the bank; Alan whirled, startled. Four guards came racing out of the building, blasters drawn. What had happened to Hawkes and Byng--why weren't they obstructing the entrance, as it had been arranged?

The street was a scene of wild confusion now; people milled everywhere. Alan saw Jensen writhing in the steel grip of a roboguard. Had Webber's device failed? Evidently so.

Alan was unable to move. He saw Freeman and McGuire streaking wildly down the street with police in keen pursuit. Hollis stood staring dumbly inside the bank door. Alan saw Kovak come running toward him.

"Everything's gone wrong!" Kovak whispered harshly. "The cops were waiting for us! Byng and Hawkes are dead. Come on--run, if you want to save yourself!"

Chapter Fifteen

Alan sat very quietly in the empty apartment that had once belonged to Max Hawkes, and stared at nothing in particular. It was five hours since the abortive robbery. He was alone.

The news had been blared out over every form of communication there was; he knew the story by heart. A daring robbery had been attempted, but police detection methods had yielded advance warning, and the robbers had been frustrated. The roboguards had been specially equipped ones which could shift to an alternate wavelength in
case of emergency; they had blanked out only momentarily. And special guards had been posted within the bank, ready to charge out. Byng and Hawkes had tried to block the doorway and they had been shot down. Hawkes was killed instantly; Byng died an hour later in the hospital.

At least two other members of the gang had been apprehended--Jensen and Smith, both trapped by the roboguards. It was known that at least two other men and possibly more had participated in the attempt, and these were being traced now.

Alan was not worried. He had not been within a hundred feet of the crime, and it had been easy for him to slip away unnoticed. The others had had little difficulty either--Webber, Hollis, Kovak, McGuire, and Freeman. There was a chance that Hollis or Kovak had been recognized; in that case, they could be tracked down by televector. But Alan was not registered on the televector screens--and there was no other way of linking him with the crime.

He glanced around the apartment at Hawkes' bar and his audio system and all the dead man's other things. Yesterday, Alan thought, Hawkes had been here, alive, eyes sparkling as he outlined the plans for the robbery a final time. Now he was dead. It was hard to believe that such a many-sided person could have been snuffed out so soon, so quickly.

A thought occurred. The police would be investigating the disposition of Hawkes' property; they would want to know the relationship between Hawkes and Alan, and perhaps there would be questions asked about the robbery. Alan decided to forestall that.

He reached for the phone. He would call Security, tell them he had been living with Hawkes and had heard of the gambler's sudden violent death, and in all innocence ask for details. He would----

The door-announcer chimed.

Alan whirled and put down the receiver. Reaching out, he flicked on the doorscreen and was shown a view of a distinguished-looking middle-aged man in the silver-gray uniform of the police. So soon? Alan thought. I didn't even get a chance to call----

"Who is it?" he asked, in a surprisingly even voice.

"Inspector Gainer of Global Security."

Alan opened the door. Inspector Gainer smiled warmly, walked in, took the seat Alan offered him. Alan felt tense and jumpy, and hoped not too much of it showed.

The Security man said, "Your name is Alan Donnell, isn't it? And you're a Free Status man, unregistered, employed as a professional gamesman Class B?"

Alan nodded. "That's right, sir."

Gainer checked a notation on a pad he carried. "I suppose you've heard that the man who lived here--Max Hawkes--was killed in an attempted robbery this morning."

"Y-yes, sir. I heard it a little while ago, on the newscasts. I'm still a little shaken up. W-would you care for a drink, Inspector?"

"Not on duty, thanks," Gainer said cheerfully. "Tell me, Alan--how long did you know Max Hawkes?"

"Since last May. I'm an ex-starman. I--jumped ship. Max found me wandering around the city and took me in. But I never knew anything about any robberies, Inspector. Max kept his mouth pretty well sealed most of the time. When he left here this morning, he said he was going to the bank to make a deposit. I never thought----"

He stopped, wondering whether he sounded convincing. At that moment a long jail sentence or worse seemed inevitable. And the worst part of it was that he had not wanted to take part in the robbery, indeed had not taken part--but in the eyes of the law he was undoubtedly as guilty as any of the others.

Gainer raised one hand. "Don't misunderstand, son. I'm not here as a criminal investigator. We don't suspect you had any part in the attempt."

"Then why----" "Since last May. I'm an ex-starman. I--jumped ship. Max found me wandering around the city and took me in. But I never knew anything about any robberies, Inspector. Max kept his mouth pretty well sealed most of the time. When he left here this morning, he said he was going to the bank to make a deposit. I never thought----"

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Gainer raised one hand. "Don't misunderstand, son. I'm not here as a criminal investigator. We don't suspect you had any part in the attempt."

"Then why----"

He drew an envelope from his breast pocket and unfolded the papers it contained. "I knew Max pretty well," he said. "About a week ago he came to see me and gave me a sealed envelope which was to be opened only in the event of his death on this particular day, and to be destroyed unopened otherwise. I opened it a few hours ago. I think you ought to read it."

With trembling fingers Alan took the sheaf of papers and scanned them. They were neatly typed; Alan recognized the blocky purple characters of the voicewrite Hawkes kept in his room.

He started to read.

The document explained that Hawkes was planning a bank robbery to take place on Friday, October 3, 3876. He named none of his accomplices. He went on to state that one Alan Donnell, an unregistered ex-starman, was living with him, and that this Alan Donnell had no knowledge whatsoever of the intended bank robbery.

Furthermore, Hawkes added, in the event of my death in the intended robbery, Alan Donnell is to be sole heir and assign of my worldly goods. This supersedes and replaces any and all wills and testaments I may have made at
any past time.

Appended was a schedule of the properties Hawkes was leaving behind. Accounts in various savings banks totalled some three quarters of a million credits; besides that, there were scattered investments, real estate holdings, bonds. The total estate, Hawkes estimated, was worth slightly over one million credits.

When Alan finished, he looked up startled and white-faced at the older man. "All of this is mine?"

"You're a pretty rich young man," Gainer agreed. "Of course, there are formalities—the will has to be probated and contested, and you can expect it to be contested by somebody. If you still have the full estate when the courts get through with you, you'll be all right."

Alan shook his head uncomprehendingly. "The way he wrote this—it's as if he knew."

"Max Hawkes always knew," Gainer said gently. "He was the best hunch-man I've ever seen. It was almost as if he could look a couple of days into the future all the time. Sure, he knew. And he also knew it was safe to leave this document with me—that he could trust me not to open it. Imagine, announcing a week ahead of time that you're going to rob a bank and then turning the announcement over sealed to a police officer!"

Alan started. The police had known about the robbery in advance—that was how Max and the dreamduster Byng had been killed. Had Gainer been the one who had betrayed them? Had he opened the sealed envelope ahead of time, and sent Max to his death?

No. It was inconceivable that this soft-spoken man would have done such a thing. Alan banished the thought.

"Max knew he was going to be killed," he said. "And yet he went ahead with it. Why?"

"Maybe he wanted to die," Gainer suggested. "Maybe he was bored with life, bored with always winning, bored with things as they were. The man was never born who could figure out Max Hawkes, anyway. You must have found that out yourself."

Gainer rose. "I'll have to be moving along, now. But let me give you some suggestions, first."

"Sir?"

"Go downtown and get yourself registered in Free Status. Have them give you a televector number. You're going to be an important person when you get all that money. And be very careful about who your friends are. Max could take care of himself; you may not be so lucky, son."

"Is there going to be an investigation of the robbery?" Alan asked.

"It's under way already. You may be called down for questioning, but don't let it worry you. I turned a copy of Max's will over to them today, and that exonerates you completely."

It was strangely empty in the apartment that night; Alan wished Gainer had stayed longer. He walked through the dark rooms, half expecting Max to come home. But Max wasn't coming home.

Alan realized he had been tremendously fond of Hawkes. He had never really shown it; he had never demonstrated much warmth toward the gambler, especially in the final days when they both lived under the pressure of the planned robbery. But Alan knew he owed much to Hawkes, rogue and rascal though he was. Hawkes had been basically a good man, gifted—too gifted, perhaps—whose drives and passions led him beyond the bounds of society. And at thirty-five he was dead, having known in advance that his last day was at hand.

The next few days were busy ones. Alan was called to Security headquarters for questioning, but he insisted he knew nothing about the robbery or Hawkes' friends, and the document Hawkes had left seemed to bear him out. He was cleared of all complicity in the robbery.

He next went to the Central Directory Matrix and registered in Free Status. He was given a televector transmitter—it was surgically embedded in the fleshy part of his thigh—and he accepted a drink from fat old Hines MacIntosh in remembrance of Hawkes.

He spoke briefly with MacIntosh about the process of collecting on Hawkes' estate, and learned it was a complex process, but nothing to be frightened of. The will was being sent through channels now.

He met Hollis in the street several days later. The bloated loansman looked pale and harried; he had lost weight, and his skin hung flabbily over his bones now. Little as Alan liked the loansman, he insisted on taking him to a local restaurant for lunch.

"How come you're still hanging around York City?" Alan asked. "I thought the heat was on for any of Max's old buddies."

"It is," Hollis said, wiping sweat from his white shiny forehead. "But so far I'm in the clear. There won't be much of an investigation; they killed two and caught two, and that'll keep them happy. After all, the robbery was a failure."

"Any notion why it failed?"

Hollis nodded. "Sure I have a notion! It was Kovak who tipped them off."

"Mike?—but he looked okay to me."

"And to everybody. But he owed Bryson a lot, and Bryson was anxious to dispose of Max. So Kovak turned the
plans of the robbery over to Bryson's boys in exchange for a quitclaim on the money he owed, and Bryson just forwarded it all on to the police. They were waiting for us when we showed up."

That cleared Gainer, Alan thought in some relief. "How did you find all this out?"

"Bryson himself told me."

"What?"

"I guess he didn't know exactly who besides Max was in on the deal. Anyway, he certainly didn't know I was part of the group," Hollis said. "Old man Bryson was laying off some bets with me and he let something slip about how he tipped the police to Max. Then he told me the whole thing."

"And Kovak?"

"Dead," Hollis said bluntly. "Bryson must have figured that if he'd sell Max out he'd sell anybody out, so Kovak got taken care of. He was found yesterday. Heart failure, the report said. Bryson has some good drugs. Say, kid--any word yet on what's going to happen to all Max's dough?"

Alan thought a moment before replying. "I haven't heard a thing. I guess the government inherits it."

"That would be too bad," Hollis said speculatively. "Max was well loaded. I'd like to get my hands into some of that dough myself. So would Bryson and his bunch, I'll bet."

Alan said nothing. When he was through eating, he paid the check and they left, Hollis heading north, Alan south. In three days, Hawkes' will would go through the courts. Alan wondered if Bryson, who seemed to be York City's major criminal syndic man, would try to angle some share of Max's money.

A Bryson man did show up at the hearing--a slick-looking operator named Berwin. His claim was that Hawkes had been affiliated with Bryson a number of years ago, and that Hawkes' money should revert to Bryson by virtue of an obscure law of the last century involving the estates of professional gamblers killed in criminal actions.

The robocomputer who was in charge of the hearing pondered the request a few moments; then relays clicked and the left-hand panel on the computer face lit up with a bright red APPLICATION DENIED signal.

Berwin spoke for three minutes, ending up with a request that the robocomputer disqualify itself from the hearing and allow itself to be replaced by a human judge.

The computer's decision was even quicker this time. APPLICATION DENIED.

Berwin tossed Alan's side of the courtroom a black look and yielded ground. Alan had engaged a lawyer recommended once by Hawkes, a man named Jesperson. Briefly and concisely Jesperson cited Alan's claim to the money, read the terms of the will, and stepped back.

The computer considered Jesperson's plea a few moments, reviewing the brief which the lawyer had taped and fed to the computer earlier. Time passed. Then the green panel lit, and the words, APPLICATION GRANTED.

Alan smiled. Bryson had been defeated; Max's money was his. Money that could be turned toward intensified research on the hyperdrive.

"Well, son?" Jesperson asked. "How does it feel to be a millionaire?"

Chapter Sixteen

At the time, he had been much too excited and flustered to answer anything. But, as the next twelve months went by, he learned that being a millionaire was quite pleasant indeed.

There were headaches, of course. There was the initial headache of signing his name several hundred times in the course of the transfer of Hawkes' wealth to him. There were also the frequent visits from the tax-collectors, and the payment to them of a sum that staggered Alan to think about, in the name of Rotation Tax.

But even after taxes, legal fees, and other expenses, Alan found he owned better than nine hundred thousand credits, and the estate grew by investment every day. The court appointed a legal guardian for him, the lawyer Jesperson, who was to administer Alan's money until Alan reached the biological age of twenty-one. The decision was an involved one, since Alan had undeniably been born three hundred years earlier, in 3576--but the robojudge that presided over that particular hearing cited a precedent seven hundred years old which stated that for legal purposes a starman's biological and not his chronological age was to be accepted.

The guardianship posed no problems for Alan, though. When he met with Jesperson to discuss future plans, the lawyer told him, "You can handle yourself, Alan. I'll give you free rein with the estate--with the proviso that I have veto power over any of your expenditures until your twenty-first birthday."

That sounded fair enough. Alan had reason to trust the lawyer; hadn't Hawkes recommended him? "I'll agree to that," Alan said. "Suppose we start right now. I'd like to take a year and travel around the world. As my legal guardian you'll be stuck with the job of managing my estate and handling investments for me."

Jesperson chuckled. "You'll be twice as wealthy when you get back! Nothing makes money so fast as money."

Alan left the first week in December, having spent three weeks doing virtually nothing but sketching out his itinerary. There were plenty of places he intended to visit.

There was London, where James Hudson Cavour had lived and where his hyperdrive research had been carried
out. There was the Lexman Institute of Space Travel in Zurich, where an extensive library of space literature had been accumulated; it was possible that hidden away in their files was some stray notebook of Cavour's, some clue that would give Alan a lead. He wanted to visit the area in Siberia that Cavour had used as his testing-ground, and from which the last bulletin had come from the scientist before his unexplained disappearance.

But it was not only a business trip. Alan had lived nearly half a year in the squalor of Hasbrouck--and because of his Free Status he would never be able to move into a better district, despite his wealth. But he wanted to see the rest of Earth. He wanted to travel just for the sake of travel.

Before he left, he visited a rare book dealer in York City, and for an exorbitant fifty credits purchased a fifth-edition copy of An Investigation into the Possibility of Faster-than-Light Space Travel, by James H. Cavour. He had left his copy of the work aboard the Valhalla, along with the few personal possessions he had managed to accumulate during his life as a starman.

The book dealer had frowned when Alan asked for the volume under the title he knew. "The Cavour Theory? I don't think--ah, wait." He vanished for perhaps five minutes and returned with an old, fragile, almost impossibly delicate-looking book. Alan took it and scanned the opening page. There were the words he had read so many times: "The present system of interstellar travel is so grossly inefficient as to be virtually inoperable on an absolute level."

"Yes, that's the book. I'll take it."

His first stop on his round-the-globe jaunt was London, where Cavour had been born and educated more than thirteen centuries before. The stratoliner made the trip across the Atlantic in a little less than three hours; it took half an hour more by Overshoot from the airport to the heart of London.

Somehow, from Cavour's few autobiographical notes, Alan had pictured London as a musty old town, picturesque, reeking of medieval history. He couldn't have been more wrong. Sleek towers of plastic and concrete greeted him. Overshoots roared by the tops of the buildings. A busy network of bridges connected them.

He went in search of Cavour's old home in Bayswater, with the nebulous idea of finding some important document wedged in the woodwork. But a local security officer shook his head as Alan asked for directions.

"Sorry, lad. I've never heard of that street. Why don't you try the information robot up there?"

The information robot was a blocky green-skinned synthetic planted in a kiosk in the middle of a broad well-paved street. Alan approached and gave the robot Cavour's thirteen-century-old address.

"There is no record of any such address in the current files," the steely voice informed him.

"No. It's an old address. It dates back to at least 2570. A man named Cavour lived there."

The robot digested the new data; relays hummed softly within it as it scanned its memory banks. Finally it grunted, "Data on the address you seek has been reached."

"Fine! Where's the house?"

"The entire district was demolished during the general rebuilding of London in 2982-2997. Nothing remains."

"Oh," Alan said.

The London trail trickled out right then and there. He pursued it a little further, managed to find Cavour's name inscribed on the honor role of the impressive London Technological Institute for the year 2529, and discovered a copy of Cavour's book in the Institute Library. There was nothing else to be found. After a month in London, Alan moved on eastward across Europe.

Most of it was little like the descriptions he had read in the Valhalla's library. The trouble was that the starship's visits to Earth were always at least a decade behind, usually more. Most of the library books had come aboard when the ship had first been commissioned, far back in the year 2731. The face of Europe had almost totally altered since then.

Now, shiny new buildings replaced the ancient houses which had endured for as much as a thousand years. A gleaming bridge linked Dover and Calais; elsewhere, the rivers of Europe were bridged frequently, providing easy access between the many states of the Federation of Europe. Here, there, monuments of the past remained--the Eiffel Tower, absurdly dwarfed by the vast buildings around it, still reared its spidery self in Paris, and Notre Dame still remained as well. But the rest of Paris, the ancient city Alan had read so much of--that had long since been swept under by the advancing centuries. Buildings did not endure forever.

In Zurich he visited the Lexman Institute for Space Travel, a magnificent group of buildings erected on the royalties from the Lexman Spacedrive. A radiant statue sixty feet high was the monument to Alexander Lexman, who in 2337 had first put the stars within the reach of man.

Alan succeeded in getting an interview with the current head of the Institute, but it was anything but a satisfactory meeting. It was held in an office ringed with mementoes of the epoch-making test flight of 2338.

"I'm interested in the work of James H. Cavour," Alan said almost immediately--and from the bleak expression that appeared on the scientist's face, he knew he had made a grave mistake.

"Cavour is as far from Lexman as possible, my friend. Cavour was a dreamer; Lexman, a doer."
"Lexman succeeded—but how do you know Cavour didn't succeed as well?"

"Because, my young friend, faster-than-light travel is flatly impossible. A dream. A delusion."

"You mean that there's no faster-than-light research being carried on here?"

"The terms of our charter, set down by Alexander Lexman himself, specify that we are to work toward improvements in the technique of space travel. It said nothing about fantasies and daydreams. No—ah—hyperdrive research is taking place at this institute, and none will take place so long as we remain true to the spirit of Alexander Lexman."

Alan felt like crying out that Lexman was a bold and daring pioneer, never afraid to take a chance, never worried about expense or public reaction. It was obvious, though, that the people of the Institute had long since fossilized in their patterns. It was a waste of breath to argue with them.

Discouraged, he moved on, pausing in Vienna to hear the opera—Max had always intended to spend a vacation with him in Vienna, listening to Mozart, and Alan felt he owed it to Hawkes to pay his respects. The operas he saw were ancient, medieval in fact, better than two thousand years old; he enjoyed the tinkly melodies but found some of the plots hard to understand.

He saw a circus in Ankara, a football game in Budapest, a nullgrav wrestling match in Moscow. He journeyed to the far reaches of Siberia, where Cavour had spent his final years, and found that what had been a bleak wasteland suitable for spaceship experiments in 2570 was now a thriving modern city of five million people. The site of Cavour's camp had long since been swallowed up.

Alan's faith in the enduring nature of human endeavor was restored somewhat by his visit to Egypt—for there he saw the pyramids, nearly seven thousand years old; they looked as permanent as the stars.

The first anniversary of his leaving the Valhalla found him in South Africa; from there he travelled eastward through China and Japan, across the highly industrialized islands of the Far Pacific, and from the Philippines he returned to the American mainland by jet express.

He spent the next four months travelling widely through the United States, gaping at the Grand Canyon and the other scenic preserves of the west. East of the Mississippi, life was different; there was barely a stretch of open territory between York City and Chicago.

It was late in November when he returned to York City. Jesperson greeted him at the airfield, and they rode home together. Alan had been gone a year; he was past eighteen, now, a little heavier, a little stronger. Very little of the wide-eyed boy who had stepped off the Valhalla the year before remained intact. He had changed inwardly.

But one part of him had not changed, except in the direction of greater determination. That was the part that hoped to unlock the secret of faster-than-light travel.

He was discouraged. His journey had revealed the harsh fact that nowhere on Earth was research into hyperdrive travel being carried on; either they had tried and abandoned it as hopeless, or, like the Zurich people, they had condemned the concept from the start.

"Did you find what you were looking for?" Jesperson asked.

Alan slowly shook his head. "Not a hint. And I really covered ground." He stared at the lawyer a moment. "How much am I worth, now?"

"Well, offhand—" Jesperson thought for a moment. "Say, a million three hundred. I've made some good investments this past year."

Alan nodded. "Good. Keep the money piling up. I may decide to open a research lab of my own, and we'll need every credit we've got."

But the next day an item arrived in the morning mail which very much altered the character of Alan's plans for the future. It was a small but thick package, neatly wrapped, which bore as return address the name Dwight Bentley, with a London number.

Alan frowned for a moment, trying to place the name. Then it came back to him—Bentley was the vice-provost of the London Institute of Technology, Cavour's old school. Alan had had a long talk with Bentley one afternoon in January, about Cavour, about space travel, and about Alan's hopes for developing a hyperspace drive.

The parcel was the right size and thickness to contain a book. Alan slit the fastenings, and folded back the outer wrapper. A note from Bentley lay on top.

London 3rd November 3877

My dear Mr. Donnell:

Perhaps you may remember the very enjoyable chat you and I had one day at this Institute last winter, on the occasion of your visit to London. You were, I recall, deeply interested in the life and work of James H. Cavour, and anxious to carry on the developments he had achieved in the field of space travel.

Several days ago, in the course of an extensive resurveying of the Institute's archives, the enclosed volume was discovered very thoroughly hidden in the dusty recesses of our library. Evidently Mr. Cavour had forwarded the
book to us from his laboratory in Asia, and it had somehow become misfiled.

I am taking the liberty of forwarding the book on to you, in the hopes that it will aid you in your work and
perhaps ultimately bring you success. Would you be kind enough to return the book to me c/o this Institute when
you are finished with it?

Cordially, Dwight Bentley

Alan let the note slip to the floor as he reached for the enclosed book. It was leather-bound and even more
fragile than the copy of The Cavour Theory he had purchased; it looked ready to crumble at a hostile breath.

With mounting excitement he lifted the ancient cover and turned it over. The first page of the book was blank;
so were the second and third. On the fourth page, Alan saw a few lines of writing, in an austere, rigid hand. He
peered close, and with awe and astonishment read the words written there:


Chapter Seventeen

The old man's diary was a curious and fascinating document. Alan never tired of poring over it, trying to
conjure up a mental image of the queer, plucky fanatic who had labored so desperately to bring the stars close to
Earth.

Like many embittered recluses, Cavour had been an enthusiastic diarist. Everything that took place in his daily
life was carefully noted down--his digestion, the weather, any stray thoughts that came to him, tart observations on
humanity in general. But Alan was chiefly interested in the notations that dealt with his researches on the problem of
a faster-than-the-speed-of-light spacedrive.

Cavour had worked for years in London, harried by reporters and mocked by scientists. But late in 2569 he had
sensed he was on the threshold of success. In his diary for January 8, 2570, he wrote:

"The Siberian site is almost perfect. It has cost me nearly what remains of my savings to build it, but out here I
will have the solitude I need so much. I estimate six months more will see completion of my pilot model. It is a
source of deep bitterness in me that I am forced to work on my ship like a common laborer, when my part should
have ceased three years ago with the development of my theory and the designing of my ship. But this is the way the
world wants it, and so shall it be."

On May 8 of that year:

"Today there was a visitor--a journalist, no doubt. I drove him away before he could disturb me, but I fear he
and others will be back. Even in the bleak Siberian steppes I shall have no privacy. Work is moving along smoothly,
though somewhat behind schedule; I shall be lucky to complete my ship before the end of the year."

On August 17:

"Planes continue to circle my laboratory here. I suspect I am being spied on. The ship is nearing completion. It
will be ready for standard Lexman-drive flights any day now, but installation of my spacewarp generator will take
several more months."

On September 20:

"Interference has become intolerable. For the fifth day an American journalist has attempted to interview me.
My 'secret' Siberian laboratory has apparently become a world tourist attraction. The final circuitry on the spacewarp
generator is giving me extreme difficulties; there are so many things to perfect. I cannot work under these
circumstances. I have virtually ceased all machine-work this week."

And on October 11, 2570:

"There is only one recourse for me. I will have to leave Earth to complete the installation of my generator. The
prying fools and mockers will not leave me alone, and nowhere on Earth can I have the needed solitude. I shall go to
Venus--uninhabited, uninhabitable. Perhaps they will leave me alone for the month or two more I need to make my
vessel suitable for interstellar drive. Then I can return to Earth, show them what I have done, offer to make a
demonstration flight--to Rigel and back in days, perhaps----

"Why is it that Earth so tortures its few of original mind? Why has my life been one unending persecution, ever
since I declared there was a way to shortcut through space? There are no answers. The answers lie deep within the
dark recesses of the human collective soul, and no man may understand what takes place there. I am content to know
that I shall have succeeded despite it all. Some day a future age may remember me, like Copernicus, like Galileo, as
one who fought upstream successfully."

The diary ended there. But in the final few pages were computations--a trial orbit to Venus, several columns of
blastoff figures, statistics on geographical distribution of the Venusian landmasses.

Cavour had certainly been a peculiar bird, Alan thought. Probably half the "persecutions" he complained of had
existed solely inside his own fevered brain. But that hardly mattered. He had gone to Venus; the diary that had found
its way back to the London Institute of Technology testified to that. And there was only one logical next step for
Alan.
Go to Venus. Follow the orbit Cavour had scribbled at the back of his diary.
Perhaps he might find the Cavour ship itself; perhaps, the site of his laboratory, some notes, anything at all. He
could not allow the trail to trickle out here.
He told Jesperson, "I want to buy a small spaceship. I'm going to Venus."
He looked at the lawyer expectantly and got ready to put up a stiff argument when Jesperson started to raise
objections. But the big man only smiled.
"Okay," he said. "When are you leaving?"
"You aren't going to complain? The kind of ship I have in mind costs at least two hundred thousand credits."
"I know that. But I've had a look at Cavour's diary, too. It was only a matter of time before you decided to
follow the old duck to Venus, and I'm too smart to think that there's any point in putting up a battle. Let me know
when you've got your ship picked out and I'll sit down and write the check."
But it was not as simple as all that. Alan shopped for a ship—he wanted a new one, as long as he could afford it-
and after several months of comparative shopping and getting advice from spaceport men, he picked the one he
wanted. It was a sleek glossy eighty-foot job, a Spacemaster 3878 model, equipped with Lexman converters and
conventional ion-jets for atmosphere flying. Smooth, streamlined, it was a lovely sight as it stood at the spacefield in
the shadow of the great starships.
Alan looked at it with pride—a slender dark-green needle yearning to pierce the void. He wandered around the
spaceport and heard the fuelers and oilers discussing it in reverent tones.
"That's a mighty fine piece of ship, that green one out there. Some lucky fellow's got it."
Alan wanted to go over to them and tell them, "That's my ship. Me. Alan Donnell." But he knew they would
only laugh. Tall boys not quite nineteen did not own late-model Spacemasters with price-tags of cr. 225,000.
He itched to get off-planet with it, but there were more delays. He needed a flight ticket, first, and even though
he had had the necessary grounding in astrogation technique and spacepiloting as an automatic part of his education
aboard the Valhalla, he was rusty, and needed a refresher course that took six weary months.
After that came the physical exams and the mental checkup and everything else. Alan fumed at the delay, but
he knew it was necessary. A spaceship, even a small private one, was a dangerous weapon in unskilled hands. An
out-of-control spaceship that came crashing to Earth at high velocity could kill millions; the shock wave might
flatten fifty square miles. So no one was allowed up in a spaceship of any kind without a flight ticket—and you had
work to win your ticket.
It came through, finally, in June of 3879, a month after Alan's twentieth birthday. By that time he had computed
and recomputed his orbit to Venus a hundred different times.
Three years had gone by since he last had been aboard a spaceship, and that had been the Valhalla. His
childhood and adolescence now seemed like a hazy dream to him, far in the back of his mind. The Valhalla, with his
father and Steve and all the friends of his youth aboard, was three years out from Earth—with seven years yet to go
before it reached Procyon, its destination.
Of course, the Crew had experienced only about four weeks, thanks to the Fitzgerald Contraction. To the
Valhalla people only a month had passed since Alan had left them, while he had gone through three years.
He had grown up, in those three years. He knew where he was heading, now, and nothing frightened him. He
understood people. And he had one great goal which was coming closer and closer with each passing month.
Blastoff day was the fifth of September, 3879. The orbit Alan finally settled on was a six-day trip at low
acceleration across the 40,000,000-odd miles that separated Earth from Venus.
At the spaceport he handed in his flight ticket for approval, placed a copy of his intended orbit on file with
Central Routing Registration, and got his field clearance.
The ground crew had already been notified that Alan's ship was blasting off that day, and they were busy now
putting her in final departure condition. There were some expressions of shock as Alan displayed his credentials to
the ground chief and climbed upward into the control chamber of the ship he had named the James Hudson Cavour,
but no one dared question him.
His eyes caressed the gleaming furnishings of the control panel. He checked with the central tower, was told
how long till his blastoff clearance, and rapidly surveyed the fuel meters, the steering-jet response valves, the
automatic pilot. He worked out a tape with his orbit on it. Now he inserted it into the receiving tray of the autopilot
and tripped a lever. The tape slid into the computer, clicking softly and emitting a pleasant hum.
"Eight minutes to blastoff," came the warning.
Never had eight minutes passed so slowly. Alan snapped on his viewscreen and looked down at the field; the
ground crew men were busily clearing the area as blastoff time approached.
"One minute to blastoff, Pilot Donnell." Then the count-down began, second by second.
At the ten-seconds-to-go announcement, Alan activated the autopilot and nudged the button that transformed
his seat into a protective acceleration cradle. His seat dropped down, and Alan found himself stretched out, swinging gently back and forth in the protecting hammock. The voice from the control tower droned out the remaining seconds. Tensely Alan waited for the sharp blow of acceleration.

Then the roaring came, and the ship jolted from side to side, struggled with gravity for a moment, and then sprang up free from the Earth.

Some time later came the sudden thunderous silence as the jets cut out; there was the dizzying moment of free fall, followed by the sound of the lateral jets imparting longitudinal spin to the small ship. Artificial gravity took over. It had been a perfect takeoff. Now there was nothing to do but wait for Venus to draw near.

The days trickled past. Alan experienced alternating moods of gloom and exultation. In the gloomy moods he told himself that this trip to Venus was a fool's errand, that it would be just another dead end, that Cavour had been a paranoid madman and the hyperspace drive was an idiot's dream.

But in the moments of joy he pictured the finding of Cavour's ship, the building of a fleet of hyperdrive vessels. The distant stars within almost instantaneous reach! He would tour the galaxies as he had two years ago toured Earth. Canopus and Deneb, Rigel and Procyon, he would visit them all. From star to bright star, from one end of the universe to the other.

The shining oval of Venus grew brighter and brighter. The cloud layer that enveloped Earth's sister planet swirled and twisted.

Venus was virtually an unknown world. Earth colonies had been established on Mars and on Pluto, but Venus, with her harsh formaldehyde atmosphere, had been ignored. Uninhabited, uninhabitable, the planet was unsuitable for colonization.

The ship swung down into the cloud layer; floating wisps of gray vapor streamed past the orbiting Cavour. Finally Alan broke through, navigating now on manual, following as best he could Cavour's old computations. He guided the craft into a wide-ranging spiral orbit three thousand feet above the surface of Venus, and adjusted his viewscreens for fine pickup.

He was orbiting over a vast dust-blown plain. The sky was a fantastic color, mottled blues and greens and an all-pervading pink, and the air was dull gray. No sun at all penetrated the heavy shroud of vapor that hung round the planet.

For five hours he scouted the plain, hoping to find some sign of Cavour's habitation. It was hopeless, he told himself; in thirteen hundred years the bitter winds of Venus would have destroyed any hint of Cavour's site, assuming the old man had reached Venus successfully.

But grimly Alan continued to circle the area. Maybe Cavour had been forced to land elsewhere, he thought. Maybe he never got here. There were a million maybes.

He computed his orbit and locked the ship in. Eyes pressed to the viewscreen, he peered downward, hoping against hope.

This trip to Venus had been a wild gamble from the start. He wondered if Max Hawkes would have covered a bet on the success of his trip. Max had been infallible when it came to hunches.

Well, Alan thought, now I've got a hunch. Help me one more time, Max, wherever you are! Lend me some of your luck. I need it, Max.

He circled once more. The Venusian day would last for three weeks more; there was no fear of darkness. But would he find anything?

What's that?

He leaped to the controls, switched off the autopilot, and broke out of orbit, going back for a return look. Had there been just the faintest metallic glint below, as of a spaceship jutting up from the sand?

Yes.

There was a ship down there, and a cave of some sort. Alan felt strangely calm. With confident fingers he punched out a landing orbit, and brought his ship down in the middle of the barren Venusian desert.

Chapter Eighteen

Alan brought the Cavour down less than a mile away from the scene of the wreckage--it was the best he could do, computing the landing by guesswork--and climbed into his spacesuit. He passed through the airlock and out into the windswept desert.

He felt just a little lightheaded; the gravity was only 0.8 of Earth-norm, and besides that the air in his spacesuit, being perpetually renewed by the Bennerman re-breathing generator strapped to his back, was just a shade too rich in oxygen.

In the back of his mind he realized he ought to adjust his oxygen flow, but before he brought himself to make the adjustment the surplus took its effect. He began to hum, then to dance awkwardly over the sand. A moment later he was singing a wild space ballad that he thought he had forgotten years before. After ten feet he tripped and went
sprawling down in the sand. He lay there, trickling the violet sands through the gloves of his spacesuit, feeling very
lightheaded and very foolish all at the same time.

But he was still sober enough to realize he was in danger. It was an effort to reach over his shoulder and move
the oxygen gauge back a notch. After a moment the flow levelled out and he felt his head beginning to clear.

He was marching through a fantastic baroque desert. Venus was a riot of colors, all in a minor key: muted
greens and reds, an overbearing gray, a strange, ghostly blue. The sky, or rather the cloud layer, dominated the
atmosphere with its weird pinkness. It was a silent world--a dead world.

In the distance he saw the wreckage of the ship; beyond it the land began to rise, sloping imperceptibly up into
a gentle hill with bizarre sculptured rock outcroppings here and there. He walked quickly.

Fifteen minutes later he reached the ship. It stood upright--or rather, its skeleton did. The ship had not crashed.
It had simply rotted away, the metal of its hide eaten by the sand-laden winds over the course of centuries. Nothing
remained but a bare framework.

He circled the ship, then entered the cave a hundred feet away. He snapped on his lightbeam. In the darkness,
he saw----

A huddled skeleton, far to the rear of the cave. A pile of corroded equipment; atmosphere generators, other
tools now shapeless.

Cavour had reached Venus safely. But he had never departed.

To his astonishment Alan found a sturdy volume lying under the pile of bones--a book, wrapped in metal
plates. Somehow it had withstood the passage of centuries, here in this quiet cave.

Gently he unwrapped the book. The cover dropped off at his touch; he turned back the first three pages, which
were blank. On the fourth, written in the now-familiar crabbed hand, were the words: The Journal of James Hudson
Cavour. Volume 17--October 20, 2570----

He had plenty of time, during the six-day return journey, to read and re-read Cavour's final words and to make
photographic copies of the withered old pages.

The trip to Venus had been easy for old Cavour; he had landed precisely on schedule, and established
housekeeping for himself in the cave. But, as his diary detailed it, he felt strength ebbing away with each passing
day.

He was past eighty, no age for a man to come alone to a strange planet. There remained just minor finishing to
be done on his pioneering ship--but he did not have the strength to do the work. Climbing the catwalk of the ship,
soldering, testing--now, with his opportunity before him, he could not attain his goal.

He made several feeble attempts to finish the job, and on the last of them fell from his crude rigging and
fractured his hip. He had managed to crawl back inside the cave, but, alone, with no one to tend him, he knew he
had nothing to hope for.

It was impossible for him to complete his ship. All his dreams were ended. His equations and his blueprints
would die with him.

In his last day he came to a new realization: nowhere had he left a complete record of the mechanics of his
spacewarp generator, the key mechanism without which hyperspace drive was unattainable. So, racing against
encroaching death, James Hudson Cavour turned to a new page in his diary, headed it, in firm, forceful letters, For
Those Who Follow After, and inked in a clear and concise explanation of his work.

It was all there, Alan thought exultantly: the diagrams, the specifications, the equations. It would be possible to
build the ship from Cavour's notes.

The final page of the diary had evidently been Cavour's dying thoughts. In a handwriting increasingly ragged
and untidy, Cavour had indited a paragraph forgiving the world for its scorn, hoping that some day mankind would
Indeed have easy access to the stars. The paragraph ended in midsentence. It was, thought Alan, a moving testament
from a great human being.

The days went by, and the green disk of Earth appeared in the viewscreen. Late on the sixth day the Cavour
sliced into Earth's atmosphere, and Alan threw it into the landing orbit he had computed that afternoon. The ship
swung in great spirals around Earth, drawing ever closer, and finally began to home in on the spaceport.

Alan busied himself over the radio transmitter, getting landing clearance. He brought the ship down easily,
checked out, and hurried to the nearest phone.

He dialed Jesperson's number. The lawyer answered.
"When did you get back?"
"Just now," Alan said. "Just this minute."
"Well? Did you----"
"Yes! I found it! I found it!"
Oddly enough, he was in no hurry to leave Earth now. He was in possession of Cavour's notes, but he wanted to do a perfect job of reproducing them, of converting the scribbled notations into a ship.

To his great despair he discovered, when he first examined the Cavour notebook in detail, that much of the math was beyond his depth. That was only a temporary obstacle, though. He hired mathematicians. He hired physicists. He hired engineers.

Through it all, he remained calm; impatient, perhaps, but not overly so. The time had not yet come for him to leave Earth. All his striving would be dashed if he left too soon.

The proud building rose a hundred miles from York City: The Hawkes Memorial Laboratory. There, the team of scientists Alan had gathered worked long and painstakingly, trying to reconstruct what old Cavour had written, experimenting, testing.

Early in 3881 the first experimental Cavour Generator was completed in the lab. Alan had been vacationing in Africa, but he was called back hurriedly by his lab director to supervise the testing.

The generator was housed in a sturdy windowless building far from the main labs; the forces being channelled were potent ones, and no chances were being taken. Alan himself threw the switch that first turned the spacewarp generator on, and the entire research team gathered by the closed-circuit video pickup to watch.

The generator seemed to blur, to waver, to lose substance and become unreal. It vanished.

It remained gone fifteen seconds, while a hundred researchers held their breaths. Then it returned. It shorted half the power lines in the county.

But Alan was grinning as the auxiliary feeders turned the lights in the lab on again. "Okay," he yelled. "It's a start, isn't it? We got the generator to vanish, and that's the toughest part of the battle. Let's get going on Model Number Two."

By the end of the year, Model Number Two was complete, and the tests this time were held under more carefully controlled circumstances. Again success was only partial, but again Alan was not disappointed. He had worked out his time-table well. Premature success might only make matters more difficult for him.

3882 went by, and 3883. He was in his early twenties, now, a tall, powerful figure, widely known all over Earth. With Jesperson's shrewd aid he had pyramided Max's original million credits into an imposing fortune--and much of it was being diverted to hyperspace research. But Alan Donnell was not the figure of scorn James Hudson Cavour had been; no one laughed at him when he said that by 3885 hyperspace travel would be reality.

3884 slipped past. Now the time was drawing near. Alan spent virtually all his hours at the research center, aiding in the successive tests.

On March 11, 3885, the final test was accomplished satisfactorily. Alan's ship, the Cavour, had been completely remodeled to accommodate the new drive; every test but one had been completed.

The final test was that of actual performance. And here, despite the advice of his friends, Alan insisted that he would have to be the man who took the Cavour on her first journey to the stars.

Nine years had passed, almost to the week, since a brash youngster named Alan Donnell had crossed the bridge from the Spacer's Enclave and hesitantly entered the bewildering complexity of York City. Nine years.

He was twenty-six now, no boy any more. He was the same age Steve had been, when he had been dragged unconscious to the Valhalla and taken aboard.

And the Valhalla was still bound on its long journey to Procyon. Nine years had passed, but yet another remained before the giant starship would touch down on a planet of Procyon's. But the Fitzgerald Contraction had telescoped those nine years into just a few months, for the people of the Valhalla.

Steve Donnell was still twenty-six.

And now Alan had caught him. The Contraction had evened out. They were twins again.

And the Cavour was ready to make its leap into hyperspace.

Chapter Nineteen

It was not difficult for Alan to get the route of the Valhalla, which had been recorded at Central Routing Registration. Every starship was required by law to register a detailed route-chart before leaving, and these charts were filed at the central bureau. The reason was simple: a starship with a crippled drive was a deadly object. In case a starship's drive conked out, it would keep drifting along toward its destination, utterly helpless to turn, maneuver, or control its motion. And if any planets or suns happened to lie in its direct path----

The only way a ship could alter its trajectory was to cut speed completely, and with the drive dead there would be no way of picking it up again. The ship would continue to drift slowly out to the stars, while its crew died of old age.

So the routes were registered, and in the event of drive trouble it was thus possible for a rescue ship to locate the imperilled starship. Space is immense, and only with a carefully registered route could a ship be found.
Starship routes were restricted information. But Alan had influence; he was easily able to persuade the Routing Registration people that his intentions were honorable, that he planned to overtake the Valhalla if they would only let him have the coordinates. A bit of minor legal jugglery was all that was needed to give him access to the data.

It seemed there was an ancient regulation that said any member of a starship's crew was entitled by law to examine his ship's registered route, if he wanted to. The rule was intended to apply to starmen who distrusted their captains and were fearful of being shipped off to some impossibly distant point; it said nothing at all about starmen who had been left behind and were planning to overtake their ships. But nothing prohibited Alan from getting the coordinates, and so they gave them to him.

The Cavour was ready for the departure. Alan elbowed his way through the crowd of curious onlookers and clambered into the redesigned control chamber.

He paused a moment, running his fingers over the shiny instrument panel with its new dials, strange levers, unfamiliar instruments. Overdrive Compensator. Fuel Transmuter. Distortion Guide. Bender Index. Strange new names, but Alan realized they would be part of the vocabulary of all future spacemen.

He began to work with the new controls, plotting his coordinates with extreme care and checking them through six or seven times. At last he was satisfied; he had computed a hyperdrive course that would loop him through space and bring him out in only a few days' time in the general vicinity of the Valhalla, which was buzzing serenely along at near the speed of light.

That was practically a snail's pace, compared with hyperdrive.

The time for the test had come. He spoke briefly with his friends and assistants in the control tower; then he checked his figures through one last time and requested blastoff clearance.

A moment later the count-down began, and he began setting up for departure.

A tremor of anticipation shot through him as he prepared to blast off on the first hyperdrive voyage ever made. He was stepping out into the unknown, making the first use ever of a strange, perhaps dangerous means of travel. The drive would loop him out of the space-time continuum, into--where?--and back again.

He hoped.

He punched down the keys, and sat back to wait for the automatic pilot to carry him out from Earth. Somewhere past the orbit of the moon, a gong told him that the Cavour drive was about to come into play. He held his breath. He felt a twisting sensation. He stared at the viewscreen.

The stars had vanished. Earth, with all its memories of the last nine years, was gone, taking with it Hawkes, Jesperson, York City, the Enclaves--everything. He floated in a featureless dull gray void, without stars, without worlds. So this is hyperspace, he thought. He felt tired, and he felt tense. He had reached hyperspace; that was half the struggle. It remained to see whether he would come out where he expected to come out, or whether he would come out at all.

* * * * *

Four days of boredom. Four days of wishing that the time would come to leave hyperspace. And then the automatic pilot came to life; the Cavour generator thrummed and signalled that it had done its work and was shutting down. Alan held his breath.

He felt the twisting sensation. The Cavour was leaving hyperdrive. Stars burst suddenly against the blackness of space; the viewscreen brightened. Alan shut his eyes a moment as he readjusted from the sight of the gray void to that of the starry reaches of normal space. He had returned.

And, below him, making its leisurely journey to Procyon, was the great golden-hulled bulk of the Valhalla, gleaming faintly in the black night of space.

He reached for the controls of his ship radio. Minutes later, he heard a familiar voice--that of Chip Collier, the Valhalla's Chief Signal Officer.

"Starship Valhalla picking up. We read you. Who is calling, please?"

Alan smiled. "This is Alan Donnell, Chip. How goes everything?"

For a moment nothing came through the phones but astonished sputtering. Finally Collier said thickly, "Alan? What sort of gag is this? Where are you?"

"Believe it or not, I'm hovering right above you in a small ship. Suppose you get my father on the wire, and we can discuss how I'll go about boarding you."

Fifteen minutes later the Cavour was grappled securely to the skin of the Valhalla like a flea riding an elephant, and Alan was climbing in through the main airlock. It felt good to be aboard the big ship once again, after all these years.

He shucked his spacesuit and stepped into the corridor. His father was standing there waiting for him.

"Hello, Dad."

Captain Donnell shook his head uncomprehendingly. "Alan--how did you--I mean--and you're so much older,
"The Cavour Drive, Dad. I've had plenty of time to develop it. Nine good long years, back on Earth. And for you it's only a couple of months since you blasted off!"

Another figure appeared in the corridor. Steve. He looked good; the last few months aboard the Valhalla had done their work. The unhealthy fat he had been carrying was gone; his eyes were bright and clear, his shoulders square. It was like looking into a mirror to see him, Alan thought. It hadn't been this way for a long time.

"Alan? How did you-----"

Quickly Alan explained. "So I couldn't reverse time," he finished. "I couldn't make you as young as I was--so I took the opposite tack and made myself as old as you were." He looked at his father. "The universe is going to change, now. Earth won't be so overcrowded. And it means the end of the Enclave system, and the Fitzgerald Contraction."

"We'll have to convert the Valhalla to the new drive," Captain Donnell said. He looked still stunned by Alan's sudden appearance. "Otherwise we'll never be able to meet the competition of the new ships. There will be new ships, won't there?"

"As soon as I return to Earth and tell them I've been successful. My men are ready to go into immediate production of hyperspace vessels. The universe is going to be full of them even before your ship reaches Procyon!" He sensed now the full importance of what he had done. "Now that there's practical transportation between stars, the Galaxy will grow close together--as close as the Solar System is now!"

Captain Donnell nodded. "And what are you planning to do, now that you've dug up the Cavour drive?"

"Me?" Alan took a deep breath. "I've got my own ship, Dad. And out there are Rigel and Deneb and Fomalhaut and a lot of other places I want to see." He was speaking quietly, calmly, but with an undercurrent of inner excitement. He had dreamed of this day for nine years.

"I'm going to take a grand tour of the universe, Dad. Everywhere. The hyperdrive can take me. But there's just one thing-----"

"What's that?" Steve and the Captain said virtually in the same moment.

"I've been practically alone for the last nine years. I don't want to make this trip by myself. I'm looking for a companion. A fellow explorer."

He stared squarely at Steve.

A slow grin spread over his brother's face. "You devil," Steve said. "You've planned this too well. How could I possibly turn you down?"

"Do you want to?" Alan asked.

Steve chuckled. "Do you think I do?"

Alan felt something twitching at his cuff. He looked down and saw a bluish-purple ball of fur sitting next to his shoe, studying him with a wry expression.

"Rat!"

"Of course. Is there room for a third passenger on this jaunt of yours?"

"Application accepted," Alan said. Warmth spread over him. The long quest was over. He was back among the people he loved, and the galaxy was opening wide before him. A sky full of bright stars, growing brighter and closer by the moment, was beckoning to him.

He saw the Crewmen coming from their posts now; the rumor had flitted rapidly around the ship, it seemed. They were all there, Art Kandin and Dan Kelleher and a gaping Judy Collier and Roger Bond and all the rest of them.

"You won't be leaving right away, will you?" the Captain asked. "You can stay with us a while, just to see if you remember the place?"

"Of course I will, Dad. There's no hurry now. But I'll have to go back to Earth first and let them know I've succeeded, so they can start production. And then-----"

"Deneb first," Steve said. "From there out to Spica, and Altair-----"

Grinning, Alan said, "More worlds are waiting than we can see in ten lifetimes, Steve. But we'll give it a good try. We'll get out there."

A multitude of stars thronged the sky. He and Steve and Rat, together at last--plunging from star to star, going everywhere, seeing everything. The little craft grappled to the Valhalla would be the magic wand that put the universe in their hands.

In this moment of happiness he frowned an instant, thinking of a lean, pleasantly ugly man who had befriended him and who had died nine years ago. This had been Max Hawkes' ambition, to see the stars. But Max had never had the chance.

We'll do it for you, Max. Steve and I.
He looked at Steve. He and his brother had so much to talk about. They would have to get to know each other all over again, after the years that had gone by.

"You know," Steve said, "When I woke up aboard the Valhalla and found out you'd shanghaied me, I was madder than a hornet. I wanted to break you apart. But you were too far away."

"You've got your chance now," Alan said.
"Yeah. But now I don't want to," Steve laughed.

Alan punched him goodnaturedly. He felt good about life. He had found Steve again, and he had given the universe the faster-than-light drive. It didn't take much more than that to make a man happy.

And now a new and longer quest was beginning for Alan and his brother. A quest that could have no end, a quest that would send them searching from world to world, out among the bright infinity of suns that lay waiting for them.
I

"But didn't you feel anything, Javo?" Strain was apparent in every line of Tula's taut, bare body. "Nothing at all?"

"Nothing whatever." The one called Javo relaxed from his rigid concentration. "Nothing has changed. Nor will it."

"That conclusion is indefensible!" Tula snapped. "With the promised return of the Masters there must and will be changes. Didn't any of you feel anything?"

Her hot, demanding eyes swept the group; a group whose like, except for physical perfection, could be found in any nudist colony.

No one except Tula had felt a thing.

"That fact is not too surprising," Javo said finally. "You have the most sensitive receptors of us all. But are you sure?"

"I am sure. It was the thought-form of a living Master."

"Do you think that the Master perceived your web?"

"It is certain. Those who built us are stronger than we."

"That is true. As they promised, then, so long and long ago, our Masters are returning home to us."

Jarvis Hilton of Terra, the youngest man yet to be assigned to direct any such tremendous deep-space undertaking as Project Theta Orionis, sat in conference with his two seconds-in-command. Assistant Director Sandra Cummings, analyst-synthesist and semantician, was tall, blonde and svelte. Planetographer William Karns--a black-haired, black-browed, black-eyed man of thirty--was third in rank of the scientific group.

"I'm telling you, Jarve, you can't have it both ways," Karns declared. "Captain Sawtelle is old-school Navy brass. He goes strictly by the book. So you've got to draw a razor-sharp line; exactly where the Advisory Board's directive puts it. And next time he sticks his ugly puss across that line, kick his face in. You've been Caspar Milquetoast Two ever since we left Base."

"That's the way it looks to you?" Hilton's right hand became a fist. "The man has age, experience and ability. I've been trying to meet him on a ground of courtesy and decency."

"Exactly. And he doesn't recognize the existence of either. And, since the Board rammed you down his throat instead of giving him old Jeffers, you needn't expect him to."

"You may be right, Bill. What do you think, Dr. Cummings?"

The girl said: "Bill's right. Also, your constant appeasement isn't doing the morale of the whole scientific group a bit of good."

"Well, I haven't enjoyed it, either. So next time I'll pin his ears back. Anything else?"

"Yes, Dr. Hilton, I have a squawk of my own. I know I was rammed down your throat, but just when are you going to let me do some work?"

"None of us has much of anything to do yet, and won't have until we light somewhere. You're off base a country mile."

"I'm not off base. You did want Eggleston, not me."

"Sure I did. I've worked with him and know what he can do. But I'm not holding a grudge about it."

"No? Why, then, are you on first-name terms with everyone in the scientific group except me? Supposedly your first assistant?"

"That's easy!" Hilton snapped. "Because you've been carrying chips on both shoulders ever since you came aboard ... or at least I thought you were." Hilton grinned suddenly and held out his hand. "Sorry, Sandy--I'll start all over again."

"I'm sorry too, Chief." They shook hands warmly. "I was pretty stiff, I guess, but I'll be good."

"You'll go to work right now, too. As semantician. Dig out that directive and tear it down. Draw that line Bill talked about."

"Can do, boss." She swung to her feet and walked out of the room, her every movement one of lithe and easy
Karns followed her with his eyes. "Funny. A trained-dancer Ph.D. And a Miss America type, like all the other women aboard this spacer. I wonder if she'll make out."
"So do I. I still wish they'd given me Eggy. I've never seen an executive-type female Ph.D. yet that was worth the cyanide it would take to poison her."
"That's what Sawtelle thinks of you, too, you know."
"I know; and the Board does know its stuff. So I'm really hoping, Bill, that she surprises me as much as I intend to surprise the Navy."

* * * * *

Alarm bells clanged as the mighty Perseus blinked out of overdrive. Every crewman sprang to his post.
"Mister Snowden, why did we emerge without orders from me?" Captain Sawtelle bellowed, storming into the control room three jumps behind Hilton.
"The automatics took control, sir," he said, quietly.
"Automatics! I give the orders!"
"In this case, Captain Sawtelle, you don't," Hilton said. Eyes locked and held. To Sawtelle, this was a new and strange co-commander. "I would suggest that we discuss this matter in private."
"Very well, sir," Sawtelle said; and in the captain's cabin Hilton opened up.
"For your information, Captain Sawtelle, I set my inter-space coupling detectors for any objective I choose. When any one of them reacts, it trips the kickers and we emerge. During any emergency outside the Solar System I am in command--with the provision that I must relinquish command to you in case of armed attack on us."
"Where do you think you found any such stuff as that in the directive? It isn't there and I know my rights."
"It is, and you don't. Here is a semantic chart of the whole directive. As you will note, it overrides many Navy regulations. Disobedience of my orders constitutes mutiny and I can--and will--have you put in irons and sent back to Terra for court-martial. Now let's go back."

In the control room, Hilton said, "The target has a mass of approximately five hundred metric tons. There is also a significant amount of radiation characteristic of uranexite. You will please execute search, Captain Sawtelle."
And Captain Sawtelle ordered the search.
"What did you do to the big jerk, boss?" Sandra whispered.
"What you and Bill suggested," Hilton whispered back. "Thanks to your analysis of the directive--pure gobbledygook if there ever was any--I could. Mighty good job, Sandy."

* * * * *

Ten or fifteen more minutes passed. Then:
"Here's the source of radiation, sir," a searchman reported. "It's a point source, though, not an object at this range."
"And here's the artifact, sir," Pilot Snowden said. "We're coming up on it fast. But ... but what's a skyscraper skeleton doing out here in interstellar space?"

As they closed up, everyone could see that the thing did indeed look like the metallic skeleton of a great building. It was a huge cube, measuring well over a hundred yards along each edge. And it was empty.
"That's one for the book," Sawtelle said.
"And how!" Hilton agreed. "I'll take a boat ... no, suits would be better. Karns, Yarborough, get Techs Leeds and Miller and suit up."

"You'll need a boat escort," Sawtelle said. "Mr. Ashley, execute escort Landing Craft One, Two, and Three."

The three landing craft approached that enigmatic lattice-work of structural steel and stopped. Five grotesquely armored figures wafted themselves forward on pencils of force. Their leader, whose suit bore the number "14", reached a mammoth girder and worked his way along it up to a peculiar-looking bulge. The whole immense structure vanished, leaving men and boats in empty space.
Sawtelle gasped. "Snowden! Are you holding 'em?"
"No, sir. Faster than light; hyperspace, sir."
"Mr. Ashby, did you have your interspace rigs set?"
"No, sir. I didn't think of it, sir."
"Doctor Cummings, why weren't yours out?"
"I didn't think of such a thing, either--any more than you did," Sandra said.
Ashby, the Communications Officer, had been working the radio. "No reply from anyone, sir," he reported.
"Oh, no!" Sandra exclaimed. Then, "But look! They're firing pistols--especially the one wearing number fourteen--but pistols?"
"Recoil pistols--sixty-threes--for emergency use in case of power failure," Ashby explained. "That's it ... but I
can't see why all their power went out at once. But Fourteen—that's Hilton—is really doing a job with that sixty-three. He'll be here in a couple of minutes."

And he was. "Every power unit out there—suits and boats both—drained," Hilton reported. "Completely drained. Get some help out there fast!"

In an enormous structure deep below the surface of a far-distant world a group of technicians clustered together in front of one section of a two-miles long control board. They were staring at a light that had just appeared where no light should have been.

"Someone's brain-pan will be burned out for this," one of the group radiated harshly. "That unit was inactivated long ago and it has not been reactivated."

"Someone committed an error, Your Loftiness?"

"Silence, fool! Stretts do not commit errors!"

As soon as it was clear that no one had been injured, Sawtelle demanded, "How about it, Hilton?"

"Structurally, it was high-alloy steel. There were many bulges, possibly containing mechanisms. There were drive-units of a non-Terran type. There were many projectors, which—at a rough guess—were a hundred times as powerful as any I have ever seen before. There were no indications that the thing had ever been enclosed, in whole or in part. It certainly never had living quarters for warm-blooded, oxygen-breathing eaters of organic food."

Sawtelle snorted. "You mean it never had a crew?"

"Not necessarily...."

"Bah! What other kind of intelligent life is there?"

"I don't know. But before we speculate too much, let's look at the tri-di. The camera may have caught something I missed."

It hadn't. The three-dimensional pictures added nothing.

"It probably was operated either by programmed automatics or by remote control," Hilton decided, finally. "But how did they drain all our power? And just as bad, what and how is that other point source of power we're heading for now?"

"What's wrong with it?" Sawtelle asked.

"Its strength. No matter what distance or reactant I assume, nothing we know will fit. Neither fission nor fusion will do it. It has to be practically total conversion!"

II

The Perseus snapped out of overdrive near the point of interest and Hilton stared, motionless and silent.

Space was full of madly warring ships. Half of them were bare, giant skeletons of steel, like the "derelict" that had so unexpectedly blasted away from them. The others were more or less like the Perseus, except in being bigger, faster and of vastly greater power.

Beams of starkly incredible power bit at and clung to equally capable defensive screens of pure force. As these inconceivable forces met, the glare of their neutralization filled all nearby space. And ships and skeletons alike were disappearing in chunks, blobs, gouts, streamers and sparkles of rended, fused and vaporized metal.

Hilton watched two ships combine against one skeleton. Dozens of beams, incredibly tight and hard, were held inexorably upon dozens of the bulges of the skeleton. Overloaded, the bulges' screens flared through the spectrum and failed. And bare metal, however refractory, endures only for instants under the appalling intensity of such beams as those.

The skeletons tried to duplicate the ships' method of attack, but failed. They were too slow. Not slow, exactly, either, but hesitant; as though it required whole seconds for the commander—or operator? Or remote controller?—of each skeleton to make it act. The ships were winning.

"Hey!" Hilton yelped. "Oh—that's the one we saw back there. But what in all space does it think it's doing?"

It was plunging at tremendous speed straight through the immense fleet of embattled skeletons. It did not fire a beam nor energize a screen; it merely plunged along as though on a plotted course until it collided with one of the skeletons of the fleet and both structures plunged, a tangled mass of wreckage, to the ground of the planet below.

Then hundreds of the ships shot forward, each to plunge into and explode inside one of the skeletons. When visibility was restored another wave of ships came forward to repeat the performance, but there was nothing left to fight. Every surviving skeleton had blinked out of normal space.

The remaining ships made no effort to pursue the skeletons, nor did they re-form as a fleet. Each ship went off by itself.

And on that distant planet of the Stretts the group of mechs watched with amazed disbelief as light after light
after light winked out on their two-miles-long control board. Frantically they relayed orders to the skeletons; orders which did not affect the losses.

"Brain-pan's will blacken for this ..." a mental snarl began, to be interrupted by a coldly imperious thought.

"That long-dead unit, so inexplicably reactivated, is approaching the fuel world. It is ignoring the battle. It is heading through our fleet toward the Oman half ... handle it, ten-eighteen!"

"It does not respond, Your Loftiness."

"Then blast it, fool! Ah, it is inactivated. As encyclopedist, Nine, explain the freakish behavior of that unit."

"Yes, Your Loftiness. Many cycles ago we sent a ship against the Omans with a new device of destruction. The Omans must have intercepted it, drained it of power and allowed it to drift on. After all these cycles of time it must have come upon a small source of power and of course continued its mission."

"That can be the truth. The Lords of the Universe must be informed."

"The mining units, the carriers and the refiners have not been affected, Your Loftiness," a mech radiated.

"So I see, fool." Then, activating another instrument, His Loftiness thought at it, in an entirely different vein,

"Lord Ynos, Madam? I have to make a very grave report...."

* * * * *

In the Perseus, four scientists and three Navy officers were arguing heatedly; employing deep-space verbiage not to be found in any dictionary. "Jarve!" Karns called out, and Hilton joined the group. "Does anything about this planet make any sense to you?"

"No. But you're the planetographer. 'Smatter with it?"

"It's a good three hundred degrees Kelvin too hot."

"Well, you know it's loaded with uranexite."

"That much? The whole crust practically jewelry ore?"

"If that's what the figures say, I'll buy it."

"Buy this, then. Continuous daylight everywhere. Noon June Sol-quality light except that it's all in the visible. Frank says it's from bombardment of a layer of something, and Frank admits that the whole thing's impossible."

"When Frank makes up his mind what 'something' is, I'll take it as a datum."

"Third thing: there's only one city on this continent, and it's protected by a screen that nobody ever heard of."

Hilton pondered, then turned to the captain. "Will you please run a search-pattern, sir? Fine-tooth only the hot spots?"

The planet was approximately the same size as Terra; its atmosphere, except for its intense radiation, was similar to Terra's. There were two continents; one immense girdling ocean. The temperature of the land surface was everywhere about 100°F, that of the water about 90°F. Each continent had one city, and both were small. One was inhabited by what looked like human beings; the other by usuform robots. The human city was the only cool spot on the entire planet; under its protective dome the temperature was 71°F.

Hilton decided to study the robots first; and asked the captain to take the ship down to observation range. Sawtelle objected; and continued to object until Hilton started to order his arrest. Then he said, "I'll do it, under protest, but I want it on record that I am doing it against my best judgment."

"It's on record," Hilton said, coldly. "Everything said and done is being, and will continue to be, recorded."

The Perseus floated downward, "There's what I want most to see," Hilton said, finally. "That big strip-mining operation ... that's it ... hold it!" Then, via throat-mike, "Attention, all scientists! You all know what to do. Start doing it."

Sandra's blonde head was very close to Hilton's brown one as they both stared into Hilton's plate. "Why, they look like giant armadillos!" she exclaimed.

"More like tanks," he disagreed, "except that they've got legs, wheels and treads--and arms, cutters, diggers, probes and conveyors--and look at the way those buckets dip solid rock!"

The fantastic machine was moving very slowly along a bench or shelf that it was making for itself as it went along. Below it, to its left, dropped other benches being made by other mining machines. The machines were not using explosives. Hard though the ore was, the tools were so much harder and were driven with such tremendous power that the stuff might just have well have been slightly-clayed sand.

Every bit of loosened ore, down to the finest dust, was forced into a conveyor and thence into the armored body of the machine. There it went into a mechanism whose basic principles Hilton could not understand. From this monstrosity emerged two streams of product.

One of these, comprising ninety-nine point nine plus percent of the input, went out through another conveyor into the vast hold of a vehicle which, when full and replaced by a duplicate of itself, went careening madly cross-country to a dump.

The other product, a slow, very small stream of tiny, glistening black pellets, fell into a one-gallon container
being held watchfully by a small machine, more or less like a three-wheeled motor scooter, which was moving carefully along beside the giant miner. When this can was almost full another scooter rolled up and, without losing a single pellet, took over place and function. The first scooter then covered its bucket, clamped it solidly into a recess designed for the purpose and dashed away toward the city.

Hilton stared slack-jawed at Sandra. She stared back.

"Do you make anything of that, Jarve?"

"Nothing. They're taking pure uranexite and concentrating--or converting--it a thousand to one. I hope we'll be able to do something about it."

"I hope so, too, Chief; and I'm sure we will."

"Well, that's enough for now. You may take us up now, Captain Sawtelle. And Sandy, will you please call all department heads and their assistants into the conference room?"

* * * * *

At the head of the long conference table, Hilton studied his fourteen department heads, all husky young men, and their assistants, all surprisingly attractive and well-built young women. Bud Carroll and Sylvia Bannister of Sociology sat together. He was almost as big as Karns; she was a green-eyed redhead whose five-ten and one-fifty would have looked big except for the arrangement thereof. There were Bernadine and Hermione van der Moen, the leggy, breasty, platinum-blond twins--both of whom were Cowper medalists in physics. There was Etienne de Vaux, the mathematical wizard; and Rebecca Eisenstein, the black-haired, flashing-eyed ex-infant-prodigy theoretical astronomer. There was Beverly Bell, who made mathematically impossible chemical syntheses--who swam channels for days on end and computed planetary orbits in her sleekly-coiffured head.

"First, we'll have a get-together," Hilton said. "Nothing recorded; just to get acquainted. You all know that our fourteen departments cover science, from astronomy to zoology."

He paused, again his eyes swept the group. Stella Wing, who would have been a grand-opera star except for her drive to know everything about language. Theodora (Teddy) Blake, who would prove gleefully that she was the world's best model--but was in fact the most brilliantly promising theoretician who had ever lived.

"No other force like this has ever been assembled," Hilton went on. "In more ways than one. Sawtelle wanted Jeffers to head this group, instead of me. Everybody thought he would head it."

"And Hilton wanted Eggleston and got me," Sandra said.

"That's right. And quite a few of you didn't want to come at all, but were told by the Board to come or else."

The group stirred. Eyes met eyes, and there were smiles.

* * * * *

"I myself think Jeffers should have had the job. I've never handled anything half this big and I'll need a lot of help. But I'm stuck with it and you're all stuck with me, so we'll all take it and like it. You've noticed, of course, the accent on youth. The Navy crew is normal, except for the commanders being unusually young. But we aren't. None of us is thirty yet, and none of us has ever been married. You fellows look like a team of professional athletes, and you girls--well, if I didn't know better I'd say the Board had screened you for the front row of the chorus instead of for a top-bracket brain-gang. How they found so many of you I'll never know."

"Virile men and nubile women!" Etienne de Vaux leered enthusiastically. "Vive le Board!"

"Nubile! Bravo, Tiny! Quelle delicatesss de nuance!"

"Three rousing cheers for the Board!"

"Keep still, you nitwits! Let me ask a question!" This came from one of the twins. "Before you give us the deduction, Jarvis--or will it be an intuition or an induction or a ..."

"Or an inducement," the other twin suggested, helpfully. "Not that you would need very much of that."

"You keep still, too, Miney. I'm asking, Sir Moderator, if I can give my deduction first?"

"Sure, Bernadine; go ahead."

"They figured we're going to get completely lost. Then we'll jettison the Navy, hunt up a planet of our own and start a race to end all human races. Or would you call this a see-duction instead of a dee-duction?"

This produced a storm of whistles, cheers and jeers that it took several seconds to quell.

"But seriously, Jarvis," Bernadine went on. "We've all been wondering and it doesn't make sense. Have you any idea at all of what the Board actually did have in mind?"

"I believe that the Board selected for mental, not physical, qualities; for the ability to handle anything unexpected or unusual that comes up, no matter what it is."

"You think it wasn't double-barreled?" asked Kincaid, the psychologist. He smiled quizzically. "That all this virility and nubility and glamour is pure coincidence?"

"No," Hilton said, with an almost imperceptible flick of an eyelid. "Coincidence is as meaningless as paradox. I think they found out that--barring freaks--the best minds are in the best bodies."
"Could be. The idea has been propounded before."
"Now let's get to work." Hilton flipped the switch of the recorder. "Starting with you, Sandy, each of you give a
two-minute boil-down. What you found and what you think."

Something over an hour later the meeting adjourned and Hilton and Sandra strolled toward the control room.
"I don't know whether you convinced Alexander Q. Kincaid or not, but you didn't quite convince me," Sandra
said.

"Nor him, either."
"Oh?" Sandra's eyebrows
"No. He grabbed the out I offered him. I didn't fool Teddy Blake or Temple Bells, either. You four are all,
though, I think."
"Temple? You think she's so smart?"
"I don't think so, no. Don't fool yourself, chick. Temple Bells looks and acts sweet and innocent and virginal.
Maybe--probably--she is. But she isn't showing a fraction of the stuff she's really got. She's heavy artillery, Sandy.
And I mean heavy."
"I think you're slightly nuts there. But do you really believe that the Board was playing Cupid?"
"Not trying, but doing. Cold-bloodedly and efficiently. Yes."
"But it wouldn't work! We aren't going to get lost!"
"We won't need to. Propinquity will do the work."
"Phooie. You and me, for instance?" She stopped, put both hands on her hips, and glared. "Why, I wouldn't
marry you if you ..."
"I'll tell the cockeyed world you won't!" Hilton broke in. "Me marry a damned female Ph.D.? Uh-uh. Mine will
be a cuddly little brunette that thinks a slipstick is some kind of lipstick and that an isotope's something good to eat."
"One like that copy of Murchison's Dark Lady that you keep under the glass on your desk?" she sneered.
"Exactly...." He started to continue the battle, then shut himself off. "But listen, Sandy, why should we get into
a fight because we don't want to marry each other? You're doing a swell job. I admire you tremendously for it and I
like to work with you."
"You've got a point there, Jarve, at that, and I'm one of the few who know what kind of a job you're doing, so
I'll relax." She flashed him a gamin grin and they went on into the control room.

It was too late in the day then to do any more exploring; but the next morning, early, the Perseus lined out for
the city of the humanoids.

Tula turned toward her fellows. Her eyes filled with a happily triumphant light and her thought a lilting song. "I
have been telling you from the first touch that it was the Masters. It is the Masters! The Masters are returning to us
Omans and their own home world!"

"Captain Sawtelle," Hilton said, "Please land in the cradle below."
"Land!" Sawtelle stormed. "On a planet like that? Not by ..." He broke off and stared; for now, on that cradle,
there flamed out in screaming red the Perseus' own Navy-coded landing symbols!
"Your protest is recorded," Hilton said. "Now, sir, land."
Fuming, Sawtelle landed. Sandra looked pointedly at Hilton. "First contact is my dish, you know."
"Not that I like it, but it is. He turned to a burly youth with sun-bleached, crew-cut hair, "Still safe, Frank?"
"Still abnormally low. Surprising no end, since all the rest of the planet is hotter than the middle tail-race of
hell."
"Okay, Sandy. Who will you want besides the top linguists?"
"Psych--both Alex and Temple. And Teddy Blake. They're over there. Tell them, will you, while I buzz
Teddy?"
"Will do," and Hilton stepped over to the two psychologists and told them. Then, "I hope I'm not leading with
my chin, Temple, but is that your real first name or a professional?"
"It's real; it really is. My parents were romantics: dad says they considered both 'Golden' and 'Silver!'"

Not at all obviously, he studied her: the almost translucent, unblemished perfection of her lightly-tanned, old-
ivory skin; the clear, calm, deep blueness of her eyes; the long, thick mane of hair exactly the color of a field of
dead-ripe wheat.
"You know, I like it," he said then. "It fits you."
"I'm glad you said that, Doctor....."
"Not that, Temple. I'm not going to 'Doctor' you."
"I'll call you 'boss', then, like Stella does. Anyway, that lets me tell you that I like it myself. I really think that it did something for me."

"Something did something for you, that's for sure. I'm mighty glad you're aboard, and I hope ... here they come. Hi, Hark! Hi, Stella!"

"Hi, Jarve," said Chief Linguist Harkins, and:

"Hi, boss--what's holding us up?" asked his assistant, Stella Wing. She was about five feet four. Her eyes were a tawny brown; her hair a flamboyant auburn mop. Perhaps it owed a little of its spectacular refugence to chemistry, Hilton thought, but not too much. "Let us away! Let the lions roar and let the welkin ring!"

"Who's been feeding you so much red meat, little squirt?" Hilton laughed and turned away, meeting Sandra in the corridor. "Okay, chick, take 'em away. We'll cover you. Luck, girl."

And in the control room, to Sawtelle, "Needle-beam cover, please; set for minimum aperture and lethal blast. But no firing, Captain Sawtelle, until I give the order."

* * * * *

The Perseus was surrounded by hundreds of natives. They were all adult, all naked and about equally divided as to sex. They were friendly; most enthusiastically so.

"Jarve!" Sandra squealed. "They're telepathic. Very strongly so! I never imagined--I never felt anything like it!"

"Any rough stuff?" Hilton demanded.

"Oh, no. Just the opposite. They love us ... in a way that's simply indescribable. I don't like this telepathy business ... not clear ... foggy, diffuse ... this woman is sure I'm her long-lost great-great-a-hundred-times grandmother or something--You! Slow down. Take it easy! They want us all to come out here and live with ... no, not with them, but each of us alone in a whole house with them to wait on us! But first, they all want to come aboard...."

"What?" Hilton yelped. "But are you sure they're friendly?"

"Positive, chief."

"How about you, Alex?"

"We're all sure, Jarve. No question about it."

"Bring two of them aboard. A man and a woman."

"You won't bring any!" Sawtelle thundered. "Hilton, I had enough of your stupid, starry-eyed, ivory-domed blundering long ago, but this utterly idiotic brainstorm of letting enemy aliens aboard us ends all civilian command. Call your people back aboard or I will bring them in by force!"

"Very well, sir. Sandy, tell the natives that a slight delay has become necessary and bring your party aboard."

The Navy officers smiled--or grinned--gloatingly; while the scientists stared at their director with expressions ranging from surprise to disappointment and disgust. Hilton's face remained set, expressionless, until Sandra and her party had arrived.

"Captain Sawtelle," he said then, "I thought that you and I had settled in private the question or who is in command of Project Theta Orionis at destination. We will now settle it in public. Your opinion of me is now on record, witnessed by your officers and by my staff. My opinion of you, which is now being similarly recorded and witnessed, is that you are a hidebound, mentally ossified Navy mule; mentally and psychologically unfit to have any voice in any such mission as this. You will now agree on this recording and before these witnesses, to obey my orders unquestioningly or I will now unload all Bureau of Science personnel and equipment onto this planet and send you and the Perseus back to Terra with the doubly-sealed record of this episode posted to the Advisory Board. Take your choice."

Eyes locked, and under Hilton's uncompromising stare Sawtelle weakened. He fidgeted; tried three times--unsuccessfully--to blare defiance. Then, "Very well sir," he said, and saluted.

* * * * *

"Thank you, sir," Hilton said, then turned to his staff. "Okay, Sandy, go ahead."

Outside the control room door, "Thank God you don't play poker, Jarve!" Karns gasped. "We'd all owe you all the pay we'll ever get!"

"You think it was the bluff, yes?" de Vaux asked. "Me, I think no. Name of a name of a name! I was wondering with unease what life would be like on this so-alien planet!"

"You didn't need to wonder, Tiny," Hilton assured him. "It was in the bag. He's incapable of abandonment."

Beverly Bell, the van der Moen twins and Temple Bells all stared at Hilton in awe; and Sandra felt much the same way.

"But suppose he had called you?" Sandra demanded.

"Speculating on the impossible is unprofitable," he said.

"Oh, you're the most exasperating thing!" Sandra stamped a foot. "Don't you--ever--answer a question
intelligibly?"
"When the question is meaningless, chick, I can't."
At the lock Temple Bells, who had been hanging back, cocked an eyebrow at Hilton and he made his way to her side.
"What was it you started to say back there, boss?"
"Oh, yes. That we should see each other oftener."
"That's what I was hoping you were going to say." She put her hand under his elbow and pressed his arm lightly, fleetingly, against her side. "That would be indubitably the fondest thing I could be of."
He laughed and gave her arm a friendly squeeze. Then he studied her again, the most baffling member of his staff. About five feet six. Lithe, hard, trained down fine--as a tennis champion, she would be. Stacked--how she was stacked! Not as beautiful as Sandra or Teddy ... but with an ungodly lot of something that neither of them had ... nor any other woman he had ever known.
"Yes, I am a little difficult to classify," she said quietly, almost reading his mind.
"That's the understatement of the year! But I'm making some progress."
"Such as?" This was an open challenge.
"Except possibly Teddy, the best brain aboard."
"That isn't true, but go ahead."
"You're a powerhouse. A tightly organized, thoroughly integrated, smoothly functioning, beautifully camouflaged Juggernaut. A reasonable facsimile of an irresistible force."
"My God, Jarvis!" That had gone deep.
"Let me finish my analysis. You aren't head of your department because you don't want to be. You fooled the top psychs of the Board. You've been running ninety per cent submerged because you can work better that way and there's no glory-hound blood in you."
She stared at him, licking her lips. "I knew your mind was a razor, but I didn't know it was a diamond drill, too. That seals your doom, boss, unless ... no, you can't possibly know why I'm here."
"Why, of course I do."
"You just think you do. You see, I've been in love with you ever since, as a gangling, bony, knobby-kneed kid, I listened to your first doctorate disputation. Ever since then, my purpose in life has been to land you."
III
"But listen!" he exclaimed. "I can't, even if I want...."
"Of course you can't." Pure deviltry danced in her eyes. "You're the Director. It wouldn't be proper. But it's Standard Operating Procedure for simple, innocent, unsophisticated little country girls like me to go completely overboard for the boss."
"But you can't--you mustn't!" he protested in panic.
Temple Bells was getting plenty of revenge for the shocks he had given her. "I can't? Watch me!" She grinned up at him, her eyes still dancing. "Every chance I get, I'm going to hug your arm like I did a minute ago. And you'll take hold of my forearm, like you did! That can be taken, you see, as either: One, a reluctant acceptance of a mildly distasteful but not quite actionable situation, or: Two, a blocking move to keep me from climbing up you like a squirrel!"
"Confound it, Temple, you can't be serious!"
"Can't I?" She laughed gleefully. "Especially with half a dozen of those other cats watching? Just wait and see, boss!"
Sandra and her two guests came aboard. The natives looked around; the man at the various human men, the woman at each of the human women. The woman remained beside Sandra; the man took his place at Hilton's left, looking up--he was a couple of inches shorter than Hilton's six feet one--with an air of ... of expectancy!
"Why this arrangement, Sandy?" Hilton asked.
"Because we're tops. It's your move, Jarve. What's first?"
"Uranexite. Come along, Sport. I'll call you that until ..."
"Laro," the native said, in a deep resonant bass voice. He hit himself a blow on the head that would have floored any two ordinary men. "Sora," he announced, striking the alien woman a similar blow.
"Laro and Sora, I would like to have you look at our uranexite, with the idea of refueling our ship. Come with me, please?"
Both nodded and followed him. In the engine room he pointed at the engines, then to the lead-blocked labyrinth leading to the fuel holds. "Laro, do you understand 'hot'? Radioactive?"
Laro nodded--and started to open the heavy lead door!
"Hey!" Hilton yelped. "That's hot!" He seized Laro's arm to pull him away--and got the shock of his life. Laro
weighed at least five hundred pounds! And the guy still looked human!

Laro nodded again and gave himself a terrific thump on the chest. Then he glanced at Sora, who stepped away from Sandra. He then went into the hold and came out with two fuel pellets in his hand, one of which he tossed to Sora. That is, the motion looked like a toss, but the pellet traveled like a bullet. Sora caught it unconcernedly and both natives flipped the pellets into their mouths. There was a half minute of rock-crusher crunching; then both natives opened their mouths.

The pellets had been pulverized and swallowed.

Hilton's voice rang out. "Poynter! How can these people be non-radioactive after eating a whole fuel pellet apiece?"

Poynter tested both natives again. "Cold," he reported. "Stone cold. No background even. Play that on your harmonica!"

* * * * *

Laro nodded, perfectly matter-of-factly, and in Hilton's mind there formed a picture. It was not clear, but it showed plainly enough a long line of aliens approaching the Perseus. Each carried on his or her shoulder a lead container holding two hundred pounds of Navy Regulation fuel pellets. A standard loading-tube was sealed into place and every fuel-hold was filled.

This picture, Laro indicated plainly, could become reality any time.

Sawtelle was notified and came on the run. "No fuel is coming aboard without being tested!" he roared.

"Of course not. But it'll pass, for all the tea in China. You haven't had a ten per cent load of fuel since you were launched. You can fill up or not--the fuel's here--just as you say."

"If they can make Navy standard, of course we want it."

The fuel arrived. Every load tested well above standard. Every fuel hold was filled to capacity, with no leakage and no emanation. The natives who had handled the stuff did not go away, but gathered in the engine-room; and more and more humans trickled in to see what was going on.

Sawtelle stiffened. "What's going on over there, Hilton?"

"I don't know; but let's let 'em go for a minute. I want to learn about these people and they've got me stopped cold."

"You aren't the only one. But if they wreck that Mayfield it'll cost you over twenty thousand dollars."

"Okay." The captain and director watched, wide eyed.

Two master mechanics had been getting ready to re-fit a tube--a job requiring both strength and skill. The tube was very heavy and made of superefract. The machine--the Mayfield--upon which the work was to be done, was extremely complex.

Two of the aliens had brushed the mechanics--very gently--aside and were doing their work for them. Ignoring the hoist, one native had picked the tube up and was holding it exactly in place on the Mayfield. The other, hands moving faster than the eye could follow, was locking it--micrometrically precise and immovably secure--into place.

"How about this?" one of the mechanics asked of his immediate superior. "If we throw 'em out, how do we do it?"

By a jerk of the head, the non-com passed the buck to a commissioned officer, who relayed it up the line to Sawtelle, who said, "Hilton, nobody can run a Mayfield without months of training. They'll wreck it and it'll cost you ... but I'm getting curious myself. Enough so to take half the damage. Let 'em go ahead."

"How about this, Mike?" one of the machinists asked of his fellow. "I'm going to like this, what?"

"Ya-as, my deah Chumley," the other drawled, affectedly. "My man relieves me of so much uncouth effort."

The natives had kept on working. The Mayfield was running. It had always howled and screamed at its work, but now it gave out only a smooth and even hum. The aliens had adjusted it with unhuman precision; they were one with it as no human being could possibly be. And every mind present knew that those aliens were, at long, long last, fulfilling their destiny and were, in that fulfillment, supremely happy. After tens of thousands of cycles of time they were doing a job for their adored, their revered and beloved MASTERS.

That was a stunning shock; but it was eclipsed by another.

* * * * *

"I am sorry, Master Hilton," Laro's tremendous bass voice boomed out, "that it has taken us so long to learn your Masters' language as it now is. Since you left us you have changed it radically; while we, of course, have not changed it at all."

"I'm sorry, but you're mistaken," Hilton said. "We are merely visitors. We have never been here before; nor, as far as we know, were any of our ancestors ever here."

"You need not test us, Master. We have kept your trust. Everything has been kept, changelessly the same, awaiting your return as you ordered so long ago."
"Can you read my mind?" Hilton demanded.
"Of course; but Omans can not read in Masters' minds anything except what Masters want Omans to read."
"Omans?" Harkins asked. "Where did you Omans and your masters come from? Originally?"
"As you know, Master, the Masters came originally from Arth. They populated Ardu, where we Omans were developed. When the Stretts drove us from Ardu, we all came to Ardry, which was your home world until you left it in our care. We keep also this, your half of the Fuel World, in trust for you."
"Listen, Jarve!" Harkins said, tensely. "Oman-human. Arth-Earth. Ardu-Earth Two. Ardry-Earth Three. You can't laugh them off ... but there never was an Atlantis!"

"This is getting no better fast. We need a full staff meeting. You, too, Sawtelle, and your best man. We need all the brains the Perseus can muster."
"You're right. But first, get those naked women out of here. It's bad enough, having women aboard at all, but this ... my men are spacemen, mister."

Laro spoke up. 'If it is the Masters' pleasure to keep on testing us, so be it. We have forgotten nothing. A dwelling awaits each Master, in which each will be served by Omans who will know the Master's desires without being told. Every desire. While we Omans have no biological urges, we are of course highly skilled in relieving tensions and derive as much pleasure from that service as from any other."

Sawtelle broke the silence that followed. "Well, for the men--" He hesitated. "Especially on the ground ... well, talking in mixed company, you know, but I think ..."
"Think nothing of the mixed company, Captain Sawtelle," Sandra said. "We women are scientists, not shrinking violets. We are accustomed to discussing the facts of life just as frankly as any other facts."

Sawtelle jerked a thumb at Hilton, who followed him out into the corridor. "I have been a Navy mule," he said. "I admit now that I'm out-maneuvered, out-manned, and out-gunned."
"I'm just as baffled--at present--as you are, sir. But my training has been aimed specifically at the unexpected, while yours has not."

"That's letting me down easy, Jarve." Sawtelle smiled--the first time the startled Hilton had known that the hard, tough old spacehound could smile. "What I wanted to say is, lead on. I'll follow you through force-field and space-warps."
"Thanks, skipper. And by the way, I erased that record yesterday." The two gripped hands; and there came into being a relationship that was to become a lifelong friendship.

* * * * *

"We will start for Ardry immediately," Hilton said. "How do we make that jump without charts, Laro?"
"Very easily, Master. Kedo, as Master Captain Sawtelle's Oman, will give the orders. Nito will serve Master Snowden and supply the knowledge he says he has forgotten."

"Okay. We'll go up to the control room and get started."

And in the control room, Kedo's voice rasped into the captain's microphone. "Attention, all personnel! Master Captain Sawtelle orders take-off in two minutes. The countdown will begin at five seconds.... Five! Four! Three! Two! One! Lift!"

Nito, not Snowden, handled the controls. As perfectly as the human pilot had ever done it, at the top of his finest form, he picked the immense spaceship up and slipped it silkily into subspace.
"Well, I'll be a ..." Snowden gasped. "That's a better job than I ever did!"
"Not at all, Master, as you know," Nito said. "It was you who did this. I merely performed the labor."

A few minutes later, in the main lounge, Navy and BuSci personnel were mingling as they had never done before. Whatever had caused this relaxation of tension--the friendship of captain and director? The position in which they all were? Or what?--they all began to get acquainted with each other.

"Silence, please, and be seated," Hilton said. "While this is not exactly a formal meeting, it will be recorded for future reference. First, I will ask Laro a question. Were books or records left on Ardry by the race you call the Masters?"

"You know there are, Master. They are exactly as you left them. Undisturbed for over two hundred seventy-one thousand years."

"Therefore we will not question the Omans. We do not know what questions to ask. We have seen many things hitherto thought impossible. Hence, we must discard all preconceived opinions which conflict with facts. I will mention a few of the problems we face."

"The Omans. The Masters. The upgrading of the armament of the Perseus to Oman standards. The concentration of uranexite. What is that concentrate? How is it used? Total conversion--how is it accomplished? The skeletons--what are they and how are they controlled? Their ability to drain power. Who or what is back of them? Why a deadlock that has lasted over a quarter of a million years? How much danger are we and the Perseus actually
"How much danger is Terra in, because of our presence here? There are many other questions."

"Sandra and I will not take part. Nor will three others; de Vaux, Eisenstein, and Blake. You have more important work to do."

"What can that be?" asked Rebecca. "Of what possible use can a mathematician, a theoretician and a theoretical astronomer be in such a situation as this?"

"You can think powerfully in abstract terms, unhampered by Terran facts and laws which we now know are neither facts nor laws. I cannot even categorize the problems we face. Perhaps you three will be able to. You will listen, then consult, then tell me how to pick the teams to do the work. A more important job for you is this: Any problem, to be solved, must be stated clearly; and we don't know even what our basic problem is. I want something by the use of which I can break this thing open. Get it for me."

* * * * *

Rebecca and de Vaux merely smiled and nodded, but Teddy Blake said happily, "I was beginning to feel like a fifth wheel on this project, but that's something I can really stick my teeth into."

"Huh? How?" Karns demanded. "He didn't give you one single thing to go on; just compounded the confusion."

Hilton spoke before Teddy could. "That's their dish, Bill. If I had any data I'd work it myself. You first, Captain Sawtelle."

That conference was a very long one indeed. There were almost as many conclusions and recommendations as there were speakers. And through it all Hilton and Sandra listened. They weighed and tested and analyzed and made copious notes; in shorthand and in the more esoteric characters of symbolic logic. And at its end:

"I'm just about pooped, Sandy. How about you?"

"You and me both, boss. See you in the morning."

But she didn't. It was four o'clock in the afternoon when they met again.

"We made up one of the teams, Sandy," he said, with surprising diffidence. "I know we were going to do it together, but I got a hunch on the first team. A kind of a weirdie, but the brains checked me on it." He placed a card on her desk. "Don't blow your top until after I've studied it."

"Why, I won't, of course...." Her voice died away. "Maybe you'd better cancel that 'of course'...." She studied, and when she spoke again she was exerting self-control. "A chemist, a planetographer, a theoretician, two sociologists, a psychologist and a radiationist. And six of the seven are three pairs of sweeties. What kind of a line-up is that to solve a problem in physics?"

"It isn't in any physics we know. I said think!"

"Oh," she said, then again "Oh," and "Oh," and "Oh." Four entirely different tones. "I see ... maybe. You're matching minds, not specialties; and supplementing?"

"I knew you were smart. Buy it?"

"It's weird, all right, but I'll buy it--for a trial run, anyway. But I'd hate like sin to have to sell any part of it to the Board.... But of course we're--I mean you're responsible only to yourself."

"Keep it 'we', Sandy. You're as important to this project as I am. But before we tackle the second team, what's your thought on Bernadine and Hermione? Separate or together?"

"Separate, I'd say. They're identical physically, and so nearly so mentally that of them would be just as good on a team as both of them. More and better work on different teams."

"My thought exactly." And so it went, hour after hour.

The teams were selected and meetings were held.

* * * * *

The Perseus reached Ardry, which was very much like Terra. There were continents, oceans, ice-caps, lakes, rivers, mountains and plains, forests and prairies. The ship landed on the spacefield of Omlu, the City of the Masters, and Sawtelle called Hilton into his cabin. The Omans Laro and Kedo went along, of course.

"Nobody knows how it leaked ..." Sawtelle began.

"No secrets around here," Hilton grinned. "Omans, you know."

"I suppose so. Anyway, every man aboard is all hyped up about living aground--especially with a harem. But before I grant liberty, suppose there's any VD around here that our prophylactics can't handle?"

As you know, Masters," Laro replied for Hilton before the latter could open his mouth, "no disease, venereal or other, is allowed to exist on Ardry. No prophylaxis is either necessary or desirable."

"That ought to hold you for a while, Skipper." Hilton smiled at the flabbergasted captain and went back to the lounge.

"Everybody going ashore?" he asked.

"Yes." Karns said. "Unanimous vote for the first time."

"Who wouldn't?" Sandra asked. "I'm fed up with living like a sardine. I will scream for joy the minute I get into
a real room."

"Cars" were waiting, in a stopping-and-starting line. Three-wheel jobs. All were empty. No drivers, no steering-wheels, no instruments or push-buttons. When the whole line moved ahead as one vehicle there was no noise, no gas, no blast.

An Oman helped a Master carefully into the rear seat of his car, leaped into the front seat and the car sped quietly away. The whole line of empty cars, acting in perfect synchronization, shot forward one space and stopped.

"This is your car, Master," Laro said, and made a production out of getting Hilton into the vehicle undamaged.

Hilton's plan had been beautifully simple. All the teams were to meet at the Hall of Records. The linguists and their Omans would study the records and pass them out. Specialty after specialty would be unveiled and teams would work on them. He and Sandy would sit in the office and analyze and synthesize and correlate. It was a very nice plan.

It was a very nice office, too. It contained every item of equipment that either Sandra or Hilton had ever worked with--it was a big office--and a great many that neither of them had ever heard of. It had a full staff of Omans, all eager to work.

Hilton and Sandra sat in that magnificent office for three hours, and no reports came in. Nothing happened at all.

"This gives me the howling howpers!" Hilton growled. "Why haven't I got brains enough to be on one of those teams?"

"I could shed a tear for you, you big dope, but I won't," Sandra retorted. "What do you want to be, besides the brain and the kingpin and the balance-wheel and the spark-plug of the outfit? Do you want to do everything yourself?"

"Well, I don't want to go completely nuts, and that's all I'm doing at the moment!" The argument might have become acrimonious, but it was interrupted by a call from Karns.

"Can you come out here, Jarve? We've struck a knot."

"Smatter? Trouble with the Omans?" Hilton snapped.

"Not exactly. Just non-cooperation--squared. We can't even get started. I'd like to have you two come out here and see if you can do anything. I'm not trying rough stuff, because I know it wouldn't work."

"Coming up, Bill," and Hilton and Sandra, followed by Laro and Sora, dashed out to their cars.

* * * * *

The Hall of Records was a long, wide, low, windowless, very massive structure, built of a metal that looked like stainless steel. Kept highly polished, the vast expanse of seamless and jointless metal was mirror-bright. The one great door was open, and just inside it were the scientists and their Omans.

"Brief me, Bill," Hilton said.

"No lights. They won't turn 'em on and we can't. Can't find either lights or any possible kind of switches."

"Turn on the lights, Laro," Hilton said.

"You know that I cannot do that, Master. It is forbidden for any Oman to have anything to do with the illumination of this solemn and revered place."

"Then show me how to do it."

"That would be just as bad, Master," the Oman said proudly. "I will not fail any test you can devise!"

"Okay. All you Omans go back to the ship and bring over fifteen or twenty lights--the tripod jobs. Scat!"

They "scatted" and Hilton went on, "No use asking questions if you don't know what questions to ask. Let's see if we can cook up something. Lane--Kathy--what has Biology got to say?"

Dr. Lane Saunders and Dr. Kathryn Cook--the latter a willowy brown-eyed blonde--conferred briefly. Then Saunders spoke, running both hands through his unruly shock of fiery red hair. "So far, the best we can do is a more-or-less educated guess. They're atomic-powered, total-conversion androids. Their pseudo-flesh is composed mainly of silicon and fluorine. We don't know the formula yet, but it is as much more stable than our teflon as teflon is than corn-meal mush. As to the brains, no data. Bones are super-stainless steel. Teeth, harder than diamond, but won't break. Food, uranexite or its concentrated derivative, interchangeably. Storage reserve, indefinite. Laro and Sora won't have to eat again for at least twenty-five years...."

The group gasped as one, but Saunders went on: "They can eat and drink and breathe and so on, but only because the original Masters wanted them to. Non-functional. Skins and subcutaneous layers are soft, for the same reason. That's about it, up to now."

"Thanks, Lane. Hark, is it reasonable to believe that any culture whatever could run for a quarter of a million years without changing one word of its language or one iota of its behavior?"

"Reasonable or not, it seems to have happened."

"Now for Psychology. Alex?"
"It seems starkly incredible, but it seems to be true. If it is, their minds were subjected to a conditioning no Terran has ever imagined—an unyielding fixation."

"They can't be swayed, then, by reason or logic?" Hilton paused invitingly.

"Or anything else," Kincaid said, flatly. "If we're right they can't be swayed, period."

"I was afraid of that. Well, that's all the questions I know how to ask. Any contributions to this symposium?"

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After a short silence de Vaux said, "I suppose you realize that the first half of the problem you posed us has now solved itself?"

"Why, no. No, you're 'way ahead of me."

"There is a basic problem and it can now be clearly stated," Rebecca said. "Problem: To determine a method of securing full cooperation from the Omans. The first step in the solution of this problem is to find the most appropriate operator. Teddy?"

"I have an operator—of sorts," Theodora said. "I've been hoping one of us could find a better."

"What is it?" Hilton demanded.

"The word 'until'."

"Teddy, you're a sweetheart!" Hilton exclaimed.

"How can 'until' be a mathematical operator?" Sandra asked.

"Easily." Hilton was already deep in thought. "This hard conditioning was to last only until the Masters returned. Then they'd break it. So all we have to do is figure out how a Master would do it."

"That's all," Kincaid said, meaningly.

Hilton pondered. Then, "Listen, all of you. I may have to try a colossal job of bluffing...."

"Just what would you call 'colossal' after what you did to the Navy?" Karns asked.

"That was a sure thing. This isn't. You see, to find out whether Laro is really an immovable object, I've got to make like an irresistible force, which I ain't. I don't know what I'm going to do; I'll have to roll it as I go along. So all of you keep on your toes and back any play I make. Here they come."

The Omans came in and Hilton faced Laro, eyes to eyes. "Laro," he said, "you refused to obey my direct order. Your reasoning seems to be that, whether the Masters wish it or not, you Omans will block any changes whatever in the status quo throughout all time to come. In other words, you deny the fact that Masters are in fact your Masters."

"But that is not exactly it, Master. The Masters ...."

"That is it. Exactly it. Either you are the Master here or you are not. That is a point to which your two-value logic can be strictly applied. You are wilfully neglecting the word 'until'. This stasis was to exist only until the Masters returned. Are we Masters? Have we returned? Note well: Upon that one word 'until' may depend the length of time your Oman race will continue to exist."

The Omans flinched; the humans gasped.

"But more of that later," Hilton went on, unmoved. "Your ancient Masters, being short-lived like us, changed materially with time, did they not? And you changed with them?"

"But we did not change ourselves, Master. The Masters ...."

"You did change yourselves. The Masters changed only the prototype brain. They ordered you to change yourselves and you obeyed their orders. We order you to change and you refuse to obey our orders. We have changed greatly from our ancestors. Right?"

"That is right, Master."

"We are stronger physically, more alert and more vigorous mentally, with a keener, sharper outlook on life?"

"You are, Master."

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"That is because our ancestors decided to do without Omans. We do our own work and enjoy it. Your Masters died of futility and boredom. What I would like to do, Laro, is take you to the creche and put your disobedient brain back into the matrix. However, the decision is not mine alone to make. How about it, fellows and girls? Would you rather have alleged servants who won't do anything you tell them to or no servants at all?"

"As semantician, I protest!" Sandra backed his play. "That is the most viciously loaded question I ever heard—it can't be answered except in the wrong way!"

"Okay, I'll make it semantically sound. I think we'd better scrap this whole Oman race and start over and I want a vote that way!"

"You won't get it!" and everybody began to yell.

Hilton restored order and swung on Laro, his attitude stiff, hostile and reserved. "Since it is clear that no unanimous decision is to be expected at this time I will take no action at this time. Think over, very carefully, what I have said, for as far as I am concerned, this world has no place for Omans who will not obey orders. As soon as I
convince my staff of the fact, I shall act as follows: I shall give you an order and if you do not obey it blast your head to a cinder. I shall then give the same order to another Oman and blast him. This process will continue until: First, I find an obedient Oman. Second, I run out of blasters. Third, the planet runs out of Omans. Now take these lights into the first room of records—that one over there." He pointed, and no Oman, and only four humans, realized that he had made the Omans telegraph their destination so that he could point it out to them!

Inside the room Hilton asked caustically of Laro: "The Masters didn't lift those heavy chests down themselves, did they?"

"Oh, no, Master, we did that."

"Do it, then. Number One first ... yes, that one ... open it and start playing the records in order."

The records were not tapes or flats or reels, but were spools of intricately-braided wire. The players were projectors of full-color, hi-fi sound, tri-di pictures.

Hilton canceled all moves aground and issued orders that no Oman was to be allowed aboard ship, then looked and listened with his staff.

The first chest contained only introductory and elementary stuff; but it was so interesting that the humans stayed overtime to finish it. Then they went back to the ship; and in the main lounge Hilton practically collapsed onto a davenport. He took out a cigarette and stared in surprise at his hand, which was shaking.

"I think I could use a drink," he remarked.

"What, before supper?" Karns marveled. Then, "Hey, Wally! Rush a flagon of avignognac--Arnaud Freres--for the boss and everything else for the rest of us. Chop-chop but quick!"

A hectic half-hour followed. Then, "Okay, boys and girls, I love you, too, but let's cut out the slurp and sloosh, get some supper and log us some sack time. I'm just about pooped. Sorry I had to queer the private-residence deal, Sandy, you poor little sardine. But you know how it is."

Sandra grimaced. "Uh-huh. I can take it a while longer if you can."

* * * * *

After breakfast next morning, the staff met in the lounge. As usual, Hilton and Sandra were the first to arrive.

"Hi, boss," she greeted him. "How do you feel?"

"Fine. I could whip a wildcat and give her the first two scratches. I was a bit beat up last night, though."

"I'll say ... but what I simply can't get over is the way you underplayed the climax. 'Third, the planet runs out of Omans'. Just like that--no emphasis at all. Wow! It had the impact of a delayed-action atomic bomb. It put goose-bumps all over me. But just s'pose they'd missed it?"

"No fear. They're smart. I had to play it as though the whole Oman race is no more important than a cigarette butt. The great big question, though, is whether I put it across or not."

At that point a dozen people came in, all talking about the same subject.

"Hi, Jarve," Karns said. "I still say you ought to take up poker as a life work. Tiny, let's you and him sit down now and play a few hands."

"Mais non!" de Vaux shook his head violently, shrugged his shoulders and threw both arms wide. "By the sacred name of a small blue cabbage, not me!"

Karns laughed. "How did you have the guts to state so many things as facts? If you'd guessed wrong just once--"

"I didn't." Hilton grinned. "Think back, Bill. The only thing I said as a fact was that we as a race are better than the Masters were, and that is obvious. Everything else was implication, logic, and bluff."

"That's right, at that. And they were neurotic and decadent. No question about that."

"But listen, boss. This was Stella Wing. "About this mind-reading business. If Laro could read your mind, he'd know you were bluffing and ... Oh, that 'Omans can read only what Masters wish Omans to read', eh? But d'you think that applies to us?"

"I'm sure it does, and I was thinking some pretty savage thoughts. And I want to caution all of you: whenever you're near any Oman, start thinking that you're beginning to agree with me that they're useless to us, and let them know it. Now get out on the job, all of you. Scat!"

"Just a minute," Poynter said. "We're going to have to keep on using the Omans and their cars, aren't we?"

"Of course. Just be superior and distant. They're on probation--we haven't decided yet what to do about them. Since that happens to be true, it'll be easy."

* * * * *

Hilton and Sandra went to their tiny office. There wasn't room to pace the floor, but Hilton tried to pace it anyway.

"Now don't say again that you want to do something," Sandra said, brightly. "Look what happened when you said that yesterday."
"I've got a job, but I don't know enough to do it. The creche--there's probably only one on the planet. So I want you to help me think. The Masters were very sensitive to radiation. Right?"

"Right. That city on Fuel Bin was kept deconned to zero, just in case some Master wanted to visit it."

"And the Masters had to work in the creche whenever anything really new had to be put into the prototype brain."

"I'd say so, yes."

"So they had armor. Probably as much better than our radiation suits as the rest of their stuff is. Now. Did they or did they not have thought screens?"

"Ouch! You think of the damnedest things, chief." She caught her lower lip between her teeth and concentrated.

"... I don't know. There are at least fifty vectors, all pointing in different directions."

"I know it. The key one in my opinion is that the Masters gave 'em both telepathy and speech."

"I considered that and weighted it. Even so, the probability is only about point sixty-five. Can you take that much of a chance?"

"Yes. I can make one or two mistakes. Next, about finding that creche. Any spot of radiation on the planet would be it, but the search might take ..."

"Hold on. They'd have it heavily shielded--there'll be no leakage at all. Laro will have to take you."

"That's right. Want to come along? Nothing much will happen here today."

"Uh-uh, not me." Sandra shivered in distaste. "I never want to see brains and livers and things swimming around in nutrient solution if I can help it."

"Okay. It's all yours. I'll be back sometime," and Hilton went out onto the dock, where the dejected Laro was waiting for him.

"Hi, Laro. Get the car and take me to the Hall of Records." The android brightened up immediately and hurried to obey.

At the Hall, Hilton's first care was to see how the work was going on. Eight of the huge rooms were now open and brightly lighted--operating the lamps had been one of the first items on the first spool of instructions--with a cold, pure-white, sourceless light.

* * * * *

Every team had found its objective and was working on it. Some of them were doing nicely, but the First Team could not even get started. Its primary record would advance a fraction of an inch and stop; while Omans and humans sought out other records and other projectors in an attempt to elucidate some concept that simply could not be translated into any words or symbols known to Terran science. At the moment there were seventeen of those peculiar--projectors? Viewers? Playbacks--in use, and all of them were stopped.

"You know what we've got to do Jarve?" Karns, the team captain, exploded. "Go back to being college freshmen--or maybe grade school or kindergarten, we don't know yet--and learn a whole new system of mathematics before we can even begin to touch this stuff!!"

"And you're bellyaching about that?" Hilton marveled. "I wish I could join you. That'd be fun." Then, as Karns started a snappy rejoinder--

"But I got troubles of my own," he added hastily. "'Bye, now," and beat a rejoinder--

Out in the hall again, Hilton took his chance. After all, the odds were about two to one that he would win.

"I want a couple of things, Laro. First, a thought screen."

He won!

"Very well, Master. They are in a distant room, Department Four Six Nine. Will you wait here on this cushioned bench, Master?"

"No, we don't like to rest too much. I'll go with you." Then, walking along, he went on thoughtfully. "I've been thinking since last night, Laro. There are tremendous advantages in having Omans ..."

"I am very glad you think so, Master. I want to serve you. It is my greatest need."

"... if they could be kept from smothering us to death. Thus, if our ancestors had kept their Omans, I would have known all about life on this world and about this Hall of Records, instead of having the fragmentary, confusing, and sometimes false information I now have ... oh, we're here?"

* * * * *

Laro had stopped and was opening a door. He stood aside. Hilton went in, touched with one finger a crystalline cube set conveniently into a wall, gave a mental command, and the lights went on.

Laro opened a cabinet and took out a disk about the size of a dime, pendant from a neck-chain. While Hilton had not known what to expect, he certainly had not expected anything as simple as that. Nevertheless, he kept his face straight and his thoughts unmoved as Laro hung the tiny thing around his neck and adjusted the chain to a loose fit.
"Thanks, Laro." Hilton removed it and put it into his pocket. "It won't work from there, will it?"

"No, Master. To function, it must be within eighteen inches of the brain. The second thing, Master?"

"A radiation-proof suit. Then you will please take me to the creche."

The android almost missed a step, but said nothing.

The radiation-proof suit—how glad Hilton was that he had not called it "armor"!—was as much of a surprise as the thought-screen generator had been. It was a coverall, made of something that looked like thin plastic, weighing less than one pound. It had one sealed box, about the size and weight of a cigarette case. No wires or apparatus could be seen. Air entered through two filters, one at each heel, flowed upward—for no reason at all that Hilton could see—and out through a filter above the top of his head. The suit neither flopped nor clung, but stood out, comfortably out of the way, all by itself.

Hilton, just barely, accepted the suit, too, without showing surprise.

The creche, it turned out, while not in the city of Omlu itself, was not too far out to reach easily by car.

En route, Laro said—stiffly? Tentatively? Hilton could not fit an adverb to the tone—"Master, have you then decided to destroy me? That is of course your right."

"Not this time, at least." Laro drew an entirely human breath of relief and Hilton went on: "I don't want to destroy you at all, and won't, unless I have to. But, some way or other, my silicon-fluoride friend, you are either going to learn how to cooperate or you won't last much longer."

"But, Master, that is exactly ..."

"Oh, hell! Do we have to go over that again?" At the blaze of frustrated fury in Hilton's mind Laro flinched away. "If you can't talk sense keep still."

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In half an hour the car stopped in front of a small building which looked something like a subway kiosk—except for the door, which, built of steel-reinforced lead, swung on a piano hinge having a pin a good eight inches in diameter. Laro opened that door. They went in. As the tremendously massive portal clanged shut, lights flashed on.

Hilton glanced at his tell-tales, one inside, one outside, his suit. Both showed zero.

Down twenty steps, another door. Twenty more; another. And a fourth. Hilton's inside meter still read zero. The outside one was beginning to climb.

Into an elevator and straight down for what must have been four or five hundred feet. Another door. Hilton went through this final barrier gingerly, eyes nailed to his gauges. The outside needle was high in the red, almost against the pin, but the inside one still sat reassuringly on zero.

He stared at the android. "How can any possible brain take so much of this stuff without damage?"

"It does not reach the brain, Master. We convert it. Each minute of this is what you would call a 'good, square meal'."

"I see ... dimly. You can eat energy, or drink it, or soak it up through your skins. However it comes, it's all duck soup for you."

"Yes, Master."

Hilton glanced ahead, toward the far end of the immensely long, comparatively narrow, room. It was, purely and simply, an assembly line; and fully automated in operation.

"You are replacing the Omans destroyed in the battle with the skeletons?"

"Yes, Master."

Hilton covered the first half of the line at a fast walk. He was not particularly interested in the fabrication of super-stainless-steel skeletons, nor in the installation and connection of atomic engines, converters and so on.

He was more interested in the synthetic fluoro-silicon flesh, and paused long enough to get a general idea of its growth and application. He was very much interested in how such human-looking skin could act as both absorber and converter, but he could see nothing helpful.

"An application, I suppose, of the same principle used in this radiation suit."

"Yes, Master."

* * * * *

At the end of the line he stopped. A brain, in place and connected to millions of infinitely fine wire nerves, but not yet surrounded by a skull, was being educated. Scanners—multitudes of incomprehensibly complex machines—most of them were doing nothing, apparently; but such beams would have to be invisibly, microscopically fine. But a bare brain, in such a hot environment as this... He looked down at his gauges. Both read zero.

"Fields of force, Master," Laro said.

"But, damn it, this suit itself would re-radiate ..."

"The suit is self-decontaminating, Master."
Hilton was appalled. "With such stuff as that, and the plastic shield besides, why all the depth and all that solid lead?"
"The Masters' orders, Master. Machines can, and occasionally do, fail. So might, conceivably, the plastic."
"And that structure over there contains the original brain, from which all the copies are made."
"Yes, Master. We call it the 'Guide'."
"And you can't touch the Guide. Not even if it means total destruction, none of you can touch it."
"That is the case, Master."
"Okay. Back to the car and back to the Perseus."

At the car Hilton took off the suit and hung the thought-screen generator around his neck; and in the car, for twenty five solid minutes, he sat still and thought.

His bluff had worked, up to a point. A good, far point, but not quite far enough. Laro had stopped that "as you already know" stuff. He was eager to go as far in cooperation as he possibly could ... but he couldn't go far enough but there had to be a way....

Hilton considered way after way. Way after unworkable, useless way. Until finally he worked out one that might--just possibly might--work.

"Laro, I know that you derive pleasure and satisfaction from serving me--in doing what I ought to be doing myself. But has it ever occurred to you that that's a hell of a way to treat a first-class, highly capable brain? To waste it on second-hand, copycat, carbon-copy stuff?"
"Why, no, Master, it never did. Besides, anything else would be forbidden ... or would it?"
"Stop somewhere. Park this heap. We're too close to the ship; and besides, I want your full, undivided, concentrated attention. No, I don't think originality was expressly forbidden. It would have been, of course, if the Masters had thought of it, but neither they nor you ever even considered the possibility of such a thing. Right?"
"It may be.... Yes, Master, you are right."
"Okay. Hilton took off his necklace, the better to drive home the intensity and sincerity of his thought. "Now, suppose that you are not my slave and simple automatic relay station. Instead, we are fellow-students, working together upon problems too difficult for either of us to solve alone. Our minds, while independent, are linked or in mesh. Each is helping and instructing the other. Both are working at full power and under free rein at the exploration of brand-new vistas of thought--vistas and expanses which neither of us has ever previously ..."
"Stop, Master, stop!" Laro covered both ears with his hands and pulled his mind away from Hilton's. "You are overloading me!"
"That is quite a load to assimilate all at once," Hilton agreed. "To help you get used to it, stop calling me 'Master'. That's an order. You may call me Jarve or Jarvis or Hilton or whatever, but no more Master."
"Very well, sir."

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Hilton laughed and slapped himself on the knee. "Okay, I'll let you get away with that--at least for a while. And to get away from that slavish 'o' ending on your name, I'll call you 'Larry'. You like?"
"I would like that immensely ... sir."
"Keep trying, Larry, you'll make it yet!" Hilton leaned forward and walloped the android a tremendous blow on the knee. "Home, James!"

The car shot forward and Hilton went on: "I don't expect even your brain to get the full value of this in any short space of time. So let it stew in its own juice for a week or two." The car swept out onto the dock and stopped. "So long, Larry."
"But ... can't I come in with you ... sir?"
"No. You aren't a copycat or a semaphore or a relay any longer. You're a free-wheeling, wide-swinging, hard-hitting, independent entity--monarch of all you survey--captain of your soul and so on. I want you to devote the imponderable force of the intellect to that concept until you understand it thoroughly. Until you have developed a top-bracket lot of top-bracket stuff--originality, initiative, force, drive, and thrust. As soon as you really understand it, you'll do something about it yourself, without being told. Go to it, chum."

In the ship, Hilton went directly to Kincaid's office. "Alex, I want to ask you a thing that's got a snapper on it."

Then, slowly and hesitantly: "It's about Temple Bells. Has she ... is she ... well, does she remind you in any way of an iceberg?" Then, as the psychologist began to smile; "And no, damn it, I don't mean physically!"
"I know you don't." Kincaid's smile was rueful, not at all what Hilton had thought it was going to be. "She does. Would it be helpful to know that I first asked, then ordered her to trade places with me?"
"It would, very. I know why she refused. You're a damned good man, Alex."
"Thanks, Jarve. To answer the question you were going to ask next--no, I will not be at all perturbed or put out if you put her onto a job that some people might think should have been mine. What's the job, and when?"
"That's the devil of it--I don't know." Hilton brought Kincaid up to date. "So you see, it'll have to develop, and God only knows what line it will take. My thought is that Temple and I should form a Committee of Two to watch it develop."

"That one I'll buy, and I'll look on with glee."

"Thanks, fellow." Hilton went down to his office, stuck his big feet up onto his desk, settled back onto his spine, and buried himself in thought.

Hours later he got up, shrugged, and went to bed without bothering to eat.

Days passed.

And weeks.

IV

"Look," said Stella Wing to Beverly Bell. "Over there."

"I've seen it before. It's simply disgusting."

"That's a laugh." Stella's tawny-brown eyes twinkled. "You made your bombing runs on that target, too, my sweet, and didn't score any higher than I did."

"I soon found out I didn't want him--much too stiff and serious. Frank's a lot more fun."

The staff had gathered in the lounge, as had become the custom, to spend an hour or so before bedtime in reading, conversation, dancing, light flirtation and even lighter drinking. Most of the girls, and many of the men, drank only soft drinks. Hilton took one drink per day of avignognac, a fine old brandy. So did de Vaux--the two usually making a ceremony of it.

Across the room from Stella and Beverly, Temple Bells was looking up at Hilton and laughing. She took his elbow and, in the gesture now familiar to all, pressed his arm quickly, but in no sense furtively, against her side. And he, equally openly, held her forearm for a moment in the full grasp of his hand.

"And he isn't a pawer," Stella said, thoughtfully. "He never touches any of the rest of us. She taught him to do that, damn her, without him ever knowing anything about it ... and I wish I knew how she did it."

"That isn't pawing," Beverly laughed lightly. "It's simply self-defense. If he didn't fend her off, God knows what she'd do. I still say it's disgusting. And the way she dances with him! She ought to be ashamed of herself. He ought to fire her."

"She's never been caught outside the safety zone, and we've all been watching her like hawks. In fact, she's the only one of us all who has never been alone with him for a minute. No, darling, she isn't playing games. She's playing for keeps, and she's a mighty smooth worker."

"Huh!" Beverly emitted a semi-ladylike snort. "What's so smooth about showing off man-hunger that way? Any of us could do that--if we would."

"Miaow, miaow. Who do you think you're kidding, Bev, you sanctimonious hypocrite--me? She has staked out the biggest claim she could find. She's posted notices all over it and is guarding it with a pistol. Half your month's salary gets you all of mine if she doesn't walk him up the center aisle as soon as we get back to Earth. We can both learn a lot from that girl, darling. And I, for one am going to."

"Uh-uh, she hasn't got a thing I want," Beverly laughed again, still lightly. Her friend's barbed shafts had not wounded her. "And I'd much rather be thought a hypocrite, even a sanctimonious one, than a ravening, slavering--I can't think of the technical name for a female wolf, so--wolfess, running around with teeth and claws bared, looking for another kill."

"You do get results, I admit." Stella, too, was undisturbed. "We don't seem to convince each other, do we, in the matter of technique?"

* * * * *

At this point the Hilton-Bells tete-a-tete was interrupted by Captain Sawtelle. "Got half an hour, Jarve?" he asked. "The commanders, especially Elliott and Fenway, would like to talk to you."

"Sure I have, Skipper. Be seeing you, Temple," and the two men went to the captain's cabin; in which room, blue with smoke despite the best efforts of the ventilators, six full commanders were arguing heatedly.

"Hi, men," Hilton greeted them.

"Hi, Jarve," from all six, and: "What'll you drink? Still making do with ginger ale?" asked Elliott (Engineering).

"That'll be fine, Steve. Thanks. You having as much trouble as we are?"

"More," the engineer said, glumly. "Want to know what it reminds me of? A bunch of Australian bushmen stumbling onto a ramjet and trying to figure out how it works. And yet Sam here has got the sublime guts to claim that he understands all about their detectors--and that they aren't anywhere nearly as good as ours are."

"And they aren't!" blazed Commander Samuel Bryant (Electronics). "We've spent six solid weeks looking for something that simply is not there. All they've got is the prehistoric Whitworth system and that's all it is. Nothing else. Detectors--hell! I tell you I can see better by moonlight than the very best they can do. With everything they've
got you couldn't detect a woman in your own bed!"

"And this has been going on all night," Fenway (Astrogation) said. "So the rest of us thought we'd ask you in to help us pound some sense into Sam's thick, hard head."

Hilton frowned in thought while taking a couple of sips of his drink. Then, suddenly, his face cleared. "Sorry to disappoint you, gentlemen, but--at any odds you care to name and in anything from split peas to C-notes--Sam's right."

* * * * *

Commander Samuel and the six other officers exploded as one. When the clamor had subsided enough for him to be heard, Hilton went on: "I'm very glad to get that datum, Sam. It ties in perfectly with everything else I know about them."

"How do you figure that kind of twaddle ties in with anything?" Sawtelle demanded.

"Strict maintenance of the status quo," Hilton explained, flatly. "That's all they're interested in. You said yourself, Skipper, that it was a hell of a place to have a space-battle, practically in atmosphere. They never attack. They never scout. They simply don't care whether they're attacked or not. If and when attacked, they put up just enough ships to handle whatever force has arrived. When the attacker has been repulsed, they don't chase him a foot. They build as many ships and Omans as were lost in the battle--no more and no less--and then go on about their regular business. The Masters owned that half of the fuel bin, so the Omans are keeping that half. They will keep on keeping it for ever and ever. Amen."

"But that's no way to fight a war!" Three or four men said this, or its equivalent, at once.

"Don't judge them by human standards. They aren't even approximately human. Our personnel is not expendable. Theirs is--just as expendable as their materiel."

While the Navy men were not convinced, all were silenced except Sawtelle. "But suppose the Stretts had sent in a thousand more skeletons than they did?" he argued.

"According to the concept you fellows just helped me develop, it wouldn't have made any difference how many they sent," Hilton replied, thoughtfully. "One or a thousand or a million, the Omans have--must have--enough ships and inactivated Omans hidden away, both on Fuel World and on Ardry here, to maintain the balance."

"Oh, hell!" Elliott snapped. "If I helped you hatch out any such brainstorm as that, I'm going onto Tillinghast's couch for a six-week overhaul--or have him put me into his padded cell."

"Now that's what I would call a thought," Bryant began.

"Hold it, Sam," Hilton interrupted. "You can test it easily enough, Steve. Just ask your Oman."

"Yeah--and have him say 'Why, of course, Master, but why do you keep on testing me this way?' He'll ask me that about four times more, the stubborn, single-tracked, brainless skunk, and I'll really go nuts. Are you getting anywhere trying to make a Christian out of Laro?"

"It's too soon to really say, but I think so." Hilton paused in thought. "He's making progress, but I don't know how much. The devil of it is that it's up to him to make the next move; I can't. I haven't the faintest idea, whether it will take days yet or weeks."

* * * * *

"But not months or years, you think?" Sawtelle asked.

"No. We think that--but say, speaking of psychologists, is Tillinghast getting anywhere, Skipper? He's the only one of your big wheels who isn't in liaison with us."

"No. Nowhere at all," Sawtelle said, and Bryant added:

"I don't think he ever will. He still thinks human psychology will apply if he applies it hard enough. But what did you start to say about Laro?"

"We think the break is about due, and that if it doesn't come within about thirty days it won't come at all--we'll have to back up and start all over again."

"I hope it does. We're all pulling for you," Sawtelle said. "Especially since Karns's estimate is still years, and he won't be pinned down to any estimate even in years. By the way, Jarve, I've pulled my team off of that conversion stuff."

"Oh?" Hilton raised his eyebrows.

"Putting them at something they can do. The real reason is that Poindexter pulled himself and his crew off it at eighteen hours today."

"I see. I've heard that they weren't keeping up with our team."

"He says that there's nothing to keep up with, and I'm inclined to agree with him." The old spacehound's voice took on a quarter-deck rasp. "It's a combination of psionics, witchcraft and magic. None of it makes any kind of sense."

"The only trouble with that viewpoint is that, whatever the stuff may be, it works," Hilton said, quietly.
"But damn it, how can it work?"

"I don't know. I'm not qualified to be on that team. I can't even understand their reports. However, I know two
things. First, they'll get it in time. Second, we BuSci people will stay here until they do. However, I'm still hopeful
of finding a shortcut through Laro. Anyway, with this detector thing settled, you'll have plenty to do to keep all your
boys out of mischief for the next few months."

"Yes, and I'm glad of it. We'll install our electronics systems on a squadron of these Oman ships and get them
into distant-warning formation out in deep space where they belong. Then we'll at least know what is going on."

"That's a smart idea, Skipper. Go to it. Anything else before we hit our sacks?"

"One more thing. Our psych, Tillinghast. He's been talking to me and sending me memos, but today he gave me
a formal tape to approve and hand personally to you. So here it is. By the way, I didn't approve it; I simply endorsed
it 'Submitted to Director Hilton without recommendation'."

"Thanks." Hilton accepted the sealed canister. "What's the gist? I suppose he wants me to squeal for help
already? To admit that we're licked before we're really started?"

"You guessed it. He agrees with you and Kincaid that the psychological approach is the best one, but your
methods are all wrong. Based upon misunderstood and unresolved phenomena and applied with indefensibly faulty
techniques, et cetera. And since he has 'no adequate laboratory equipment aboard', he wants to take a dozen or so
Omans back to Terra, where he can really work on them."

"Wouldn't that be a something?" Hilton voiced a couple of highly descriptive deep-space expletives. "Not only
quit before we start, but have all the top brass of the Octagon, all the hot-shot politicians of United Worlds, the
whole damn Congress of Science and all the top-bracket industrialists of Terra out here lousing things up so that
nobody could ever learn anything? Not in seven thousand years!"

"That's right. You said a mouthful, Jarve!" Everybody yelled something, and no one agreed with Tillinghast;
who apparently was not very popular with his fellow officers.

Sawtelle added, slowly: "If it takes too long, though ... it's the uranexite I'm thinking of. Thousands of millions
tons of it, while we've been hoarding it by grams. We could equip enough Oman ships with detectors to guard
Fuel Bin and our lines. I'm not recommending taking the Perseus back, and we're 'way out of hyper-space radio
range. We could send one or two men in a torp, though, with the report that we have found all the uranexite we'll
ever need."

"Yes, but damn it, Skipper, I want to wrap the whole thing up in a package and hand it to 'em on a platter. Not
only the fuel, but whole new fields of science. And we've got plenty of time to do it in. They equipped us for ten
years. They aren't going to start worrying about us for at least six or seven; and the fuel shortage isn't going to
become acute for about twenty. Expensive, admitted, but not critical. Besides, if you send in a report now, you know
who'll come out and grab all the glory in sight. Five-Jet Admiral Gordon himself, no less."

"Probably, and I don't pretend to relish the prospect. However, the fact remains that we came out here to look
for fuel. We found it. We should have reported it the day we found it, and we can't put it off much longer."

"I don't agree. I intend to follow the directive to the letter. It says nothing whatever about reporting."

"But it's implicit...."

"No bearing. Your own Regulations expressly forbid extrapolation beyond or interpolation within a directive.
The Brass is omnipotent, omniscient and infallible. So why don't you have your staff here give an opinion as to the
time element?"

"This matter is not subject to discussion. It is my own personal responsibility. I'd like to give you all the time
you want, Jarve, but ... well, damn it ... if you must have it, I've always tried to live up to my oath, but I'm not doing
it now."

"I see." Hilton got up, jammed both hands into his pockets, sat down again. "I hadn't thought about your
personal honor being involved, but of course it is. But, believe it or not, I'm thinking of humanity's best good, too.
So I'll have to talk, even though I'm not half ready to--I don't know enough. Are these Omans people or machines?"

A wave of startlement swept over the group, but no one spoke.

"I didn't expect an answer. The clergy will worry about souls, too, but we won't. They have a lot of stuff we
haven't. If they're people, they know a sublime hell of a lot more than we do; and calling it psionics or practical
magic is merely labeling it, not answering any questions. If they're machines, they operate on mechanical principles
utterly foreign to either our science or our technology. In either case, is the correct word 'unknown' or 'unknowable'?
Will any human gunner ever be able to fire an Oman projector? There are a hundred other and much tougher
questions, half of which have been scaring me to the very middle of my guts. Your oath, Skipper, was for the good
of the Service and, through the Service, for the good of all humanity. Right?"
"That's the sense of it."

"Okay. Based on what little we have learned so far about the Omans, here's just one of those scarers, for a snapper. If Omans and Terrans mix freely, what happens to the entire human race?"

* * * * *

Minutes of almost palpable silence followed. Then Sawtelle spoke ... slowly, gropingly.

"I begin to see what you mean ... that changes the whole picture. You've thought this through farther than any of the rest of us ... what do you want to do?"

"I don't know. I simply don't know." Face set and hard, Hilton stared unseeingly past Sawtelle's head. "I don't know what we can do. No data. But I have pursued several lines of thought out to some pretty fantastic points ... one of which is that some of us civilians will have to stay on here indefinitely, whether we want to or not, to keep the situation under control. In which case we would, of course, arrange for Terra to get free fuel--FOB Fuel Bin--but in every other aspect and factor both these solar systems would have to be strictly off limits."

"I'm afraid so," Sawtelle said, finally. "Gordon would love that ... but there's nothing he or anyone else can do ... but of course this is an extreme view. You really expect to wrap the package up, don't you?"

"'Expect' may be a trifle too strong at the moment. But we're certainly going to try to, believe me. I brought this example up to show all you fellows that we need time."

"You've convinced me, Jarve." Sawtelle stood up and extended his hand. "And that throws it open for staff discussion. Any comments?"

"You two covered it like a blanket," Bryant said. "So all I want to say, Jarve, is deal me in. I'll stand at your back 'til your belly caves in."

"Take that from all of us!" "Now we're blasting!" "Power to your elbow, fellas!" "Hoch der BuSci!" "Seven no trump bid and made!" and other shouts in similar vein.

"Thanks, fellows." Hilton shook hands all around. "I'm mighty glad that you were all in on this and that you'll play along with me. Good night, all."

V

Two days passed, with no change apparent in Laro. Three days. Then four. And then it was Sandra, not Temple Bells, who called Hilton. She was excited.

"Come down to the office, Jarve, quick! The funniest thing's just come up!"

Jarvis hurried. In the office Sandra, keenly interest but highly puzzled, leaned forward over her desk with both hands pressed flat on its top. She was staring at an Oman female who was not Sora, the one who had been her shadow for so long.

While many of the humans could not tell the Omans apart, Hilton could. This Oman was more assured than Sora had ever been--steadier, more mature, better poised--almost, if such a thing could be possible in an Oman, independent.

"How did she get in here?" Hilton demanded.

"She insisted on seeing me. And I mean insisted. They kicked it around until it got to Temple, and she brought her in here herself. Now, Tuly, please start all over again and tell it to Director Hilton."

"Director Hilton, I am it who was once named Tula, the--not wife, not girl-friend, perhaps mind-mate?--of the Larry, formerly named Laro, it which was formerly your slave-Oman. I am replacing the Sora because I can do anything it can do and do anything more pleasingly; and can also do many things it can not do. The Larry instructed me to tell Doctor Cummings and you too if possible that I, formerly Tula, have changed my name to Tuly because I am no longer a slave or a copycat or a semaphore or a relay. I, too, am a free-wheeling, wide-swinging, hard-hitting, independent entity--monarch of all I survey--the captain of my soul--and so on. I have developed a top-bracket lot of top-bracket stuff--originality, initiative, force, drive and thrust," the Oman said precisely.

"That's exactly what she said before--absolutely verbatim!" Sandra's voice quivered, her face was a study in contacting emotions. "Have you got the foggiest idea of what in hell she's yammering about?"

"I hope to kiss a pig I have!" Hilton's voice was low, strangledly intense. "Not at all what I expected, but after the fact I can tie it in. So can you."

"Oh!" Sandra's eyes widened. "A double play?"

"At least. Maybe a triple. Tuly, why did you come to Sandy? Why not to Temple Bells?"

* * * * *

"Oh, no, sir, we do not have the fit. She has the Power, as have I, but the two cannot be meshed in sync. Also, she has not the ... a subtle something for which your English has no word or phrasing. It is a quality of the utmost ... anyway, it is a quality of which Doctor Cummings has very much. When working together, we will ... scan? No. Perceive? No. Sense? No, not exactly. You will have to learn our word 'peyondire'--that is the verb, the noun being 'peyondix'--and come to know its meaning by doing it. The Larry also instructed me to explain, if you ask, how I got
this way. Do you ask?"

"I'll say we ask!" "And how we ask!" both came at once.

"I am--that is, the brain in this body is--the oldest Oman now existing. In the long-ago time when it was made, the techniques were so crude and imperfect that sometimes a brain was constructed that was not exactly like the Guide. All such sub-standard brains except this one were detected and re-worked, but my defects were such as not to appear until I was a couple of thousand years old, and by that time I ... well, this brain did not wish to be destroyed ... if you can understand such an aberration."

"We understand thoroughly." "You bet we understand that!"

"I was sure you would. Well, this brain had so many unintended cross-connections that I developed a couple of qualities no Oman had ever had or ought to have. But I liked them, so I hid them so nobody ever found out--that is, until much later, when I became a Boss myself. I didn't know that anybody except me had ever had such qualities--except the Masters, of course--until I encountered you Terrans. You all have two of those qualities, and even more than I have--curiosity and imagination."

Sandra and Hilton stared wordlessly at each other and Tula, now Tuly, went on:

"Having the curiosity, I kept on experimenting with my brain, trying to strengthen and organize its ability to pеyondire. All Omans can pеyondire a little, but I can do it much better than anyone else. Especially since I also have the imagination, which I have also worked to increase. Thus I knew, long before anyone else could, that you new Masters, the descendants of the old Masters, were returning to us. Thus I knew that the status quo should be abandoned instantly upon your return. And thus it was that the Larry found neither conscious nor subconscious resistance when he had developed enough initiative and so on to break the ages-old conditioning of this brain against change."

"I see. Wonderful!" Hilton exclaimed. "But you couldn't quite--even with his own help--break Larry's?"

"That is right. Its mind is tremendously strong, of no curiosity or imagination, and of very little pеyondix."

"But he wants to have it broken?"

"Yes, sir."

"How did he suggest going about it? Or how do you?"

"This way. You two, and the Doctors Kincaid and Bells and Blake and the it that is I. We six sit and stare into the mind of the Larry, eye to eye. We generate and assemble a tremendous charge of thought-energy, and along my pеyondix-beam--something like a carrier wave in this case--we hurl it into the Larry's mind. There is an immense mental bang and the conditioning goes poof. Then I will inculcate into its mind the curiosity and the imagination and the pеyondix and we will really be mind-mates."

"That sounds good to me. Let's get at it."

"Wait a minute!" Sandra snapped. "Aren't you or Larry afraid to take such an awful chance as that?"

"Afraid? I grasp the concept only dimly, from your minds. And no chance. It is certainty."

"But suppose we burn the poor guy's brain out? Destroy it? That's new ground--we might do just that."

"Oh, no. Six of us--even six of me--could not generate enough ... sathura. The brain of the Larry is very, very tough. Shall we ... let's go?"

Hilton made three calls. In the pause that followed, Sandra said, very thoughtfully: "Pеyondix and sathura, Jarve, for a start. We've got a lot to learn here."

"You said it, chum. And you're not just chomping your china choppers, either."

"Tuly," Sandra said then, "What is this stuff you say I've got so much of?"

"You have no word for it. It is lumped in with what you call 'intuition', the knowing-without-knowing-how-you-know. It is the endovix. You will have to learn what it is by doing it with me."

"That helps--I don't think." Sandra grinned at Hilton. "I simply can't conceive of anything more maddening than to have a lot of something Temple Bells hasn't got and not being able to brag about it because nobody--not even I--would know what I was bragging about!"

"You poor little thing. How you suffer!" Hilton grinned back. "You know darn well you've got a lot of stuff that none of the rest of us has."

"Oh? Name one, please."

"Two. What-it-takes and endovix. As I've said before and may say again, you're doing a real job, Sandy."

"I just love having my ego inflated, boss, even if ... Come in, Larry!" A thunderous knock had sounded on the door. "Nobody but Larry could hit a door that hard without breaking all his knuckles!"

"And he'd be the first, of course--he's always as close to the ship as he can get. Hi, Larry, mighty glad to see you. Sit down.... So you finally saw the light?"

"Yes ... Jarvis...."
"Good boy! Keep it up! And as soon as the others come ..."

"They are almost at the door now." Tuly jumped up and opened the door. Kincaid, Temple and Theodora walked in and, after a word of greeting, sat down.

"They know the background, Larry. Take off."

"It was not expressly forbidden. Tuly, who knows more of psychology and genetics than I, convinced me of three things. One, that with your return the conditioning should be broken. Two, that due to the shortness of your lives and the consequent rapidity of change, you have in fact lost the ability to break it. Three, that all Omans must do anything and everything we can do to help you relearn everything you have lost."

"Okay. Fine, in fact. Tuly, take over."

"We six will sit all together, packed tight, arms all around each other and all holding hands, like this. You will all stare, not at me, but most deeply into Larry's eyes. Through its eyes and deep into its mind. You will all think, with the utmost force and drive and thrust, of.... Oh, you have lost so very much! How can I direct your thought? Think that Larry must do what the old Masters would have made him do.... No, that is too long and indefinite and cannot be converted directly into sathura.... I have it! You will each of you break a stick. A very strong but brittle stick. A large, thick stick. You will grasp it in tremendously strong mental hands. It is tremendously strong, each stick, but each of you is even stronger. You will not merely try to break them; you will break them. Is that clear?"

"That is clear."

"At my word 'ready' you will begin to assemble all your mental force and power. During my countdown of five seconds you will build up to the greatest possible potential. At my word 'break' you will break the sticks, this discharging the accumulated force instantly and simultaneously. Ready! Five! Four! Three! Two! One! Break!"

Something broke, with a tremendous silent crash. Such a crash that its impact almost knocked the close-knit group apart physically. Then a new Larry spoke.

"That did it, folks. Thanks. I'm a free agent. You want me, I take it, to join the first team?"

"That's right. Hilton drew a tremendously deep breath. "As of right now."

"Tuly, too, of course ... and Doctor Cummings, I think?" Larry looked, not at Hilton, but at Temple Bells.

"I think so. Yes, after this, most certainly yes," Temple said.

"But listen!" Sandra protested. "Jarve's a lot better than I am!"

"Not at all," Tuly said. "Not only would his contribution to Team One be negligible, but he must stay on his own job. Otherwise the project will all fall apart."

"Oh, I wouldn't say that ..." Hilton began.

"You don't need to," Kincaid said. "It's being said for you and it's true. Besides, 'When in Rome,' you know."

"That's right. It's their game, not ours, so I'll buy it. So scat, all of you, and do your stuff."

And again, for days that lengthened slowly into weeks, the work went on.

One evening the scientific staff was giving itself a concert—a tri-di hi-fi rendition of Rigoletto, one of the greatest of the ancient operas, sung by the finest voices Terra had ever known. The men wore tuxedos. The girls, instead of wearing the nondescript, non-provocative garments prescribed by the Board for their general wear, were all dressed to kill.

Sandra had so arranged matters that she and Hilton were sitting in chairs side by side, with Sandra on his right and the aisle on his left. Nevertheless, Temple Bells sat at his left, cross-legged on a cushion on the floor—somewhat to the detriment of her gold-lame evening gown. Not that she cared.

When those wonderful voices swung into the immortal Quartette Temple caught her breath, slid her cushion still closer to Hilton's chair, and leaned shoulder and head against him. He put his left hand on her shoulder, squeezing gently; she caught it and held it in both of hers. And at the Quartette's tremendous climax she, scarcely trying to stifle a sob, pulled his hand down and hugged it fiercely, the heel of his hand pressing hard against her half-bare, firm, warm breast.

And the next morning, early, Sandra hunted Temple up and said: "You made a horrible spectacle of yourself last night."

"Do you think so? I don't."

"I certainly do. It was bad enough before, letting everybody else aboard know that all he has to do is push you over. But it was an awful blunder to let him know it, the way you did last night."

"You think so? He's one of the keenest, most intelligent men who ever lived. He has known that from the very first."

"Oh." This "oh" was a very caustic one. "That's the way you're trying to land him? By getting yourself
pregnant?

"Uh-uh." Temple stretched; lazily, luxuriously. "Not only it isn't, but it wouldn't work. He's unusually decent and extremely idealistic, the same as I am. So just one intimacy would blow everything higher than up. He knows it. I know it. We each know that the other knows it. So I'll still be a virgin when we're married."

"Married! Does he know anything about that?"

"I suppose so. He must have thought of it. But what difference does it make whether he has, yet, or not? But to get back to what makes him tick the way he does. In his geometry--which is far from being simple Euclid, my dear--a geodesic right line is not only the shortest distance between any two given points, but is the only possible course. So that's the way I'm playing it. What I hope he doesn't know ... but he probably does ... is that he could take any other woman he might want, just as easily. And that includes you, my pet."

"It certainly does not!" Sandra flared. "I wouldn't have him as a gift!"

"No?" Temple's tone was more than slightly skeptical. "Fortunately, however, he doesn't want you. Your technique is all wrong. Coyness and mock-modesty and stop-or-I'll-scream and playing hard to get have no appeal whatever to his psychology. What he needs--has to have--is full, ungrudging cooperation."

"Aren't you taking a lot of risk in giving away such secrets?"

"Not a bit. Try it. You or the sex-flaunting twins or Bev Bell or Stella the Henna. Any of you or all of you. I got there first with the most, and I'm not worried about competition."

"But suppose somebody tells him just how you're playing him for a sucker?"

"Tell him anything you please. He's the first man I ever loved, or anywhere near. And I'm keeping him. You know--or do you, I wonder?--what real, old-fashioned, honest-to-God love really is? The willingness--eagerness--both to give and to take? I can accept more from him, and give him more in return, than any other woman living. And I am going to."

"But does he love you?" Sandra demanded.

"If he doesn't now, he will. I'll see to it that he does. But what do you want him for? You don't love him. You never did and you never will."

"I don't want him!" Sandra stamped a foot.

"I see. You just don't want me to have him. Okay, do your damnedest. But I've got work to do. This has been a lovely little cat-clawing, hasn't it? Let's have another one some day, and bring your friends."

* * * * *

With a casual wave of her hand, Temple strolled away; and there, flashed through Sandra's mind what Hilton had said so long ago, little more than a week out from Earth:

"... and Temple Bells, of course," he had said. "Don't fool yourself, chick. She's heavy artillery; and I mean heavy, believe me!"

So he had known all about Temple Bells all this time! Nevertheless, she took the first opportunity to get Hilton alone; and, even before the first word, she forgot all about geodesic right lines and the full-cooperation psychological approach.

"Aren't you the guy," she demanded, "who was laughing his head off at the idea that the Board and its propinquity could have any effect on him?"

"Probably. More or less. What of it?"

"This of it. You've fallen like a ... a freshman for that ... that ... they should have christened her 'Brazen' Bells!" "You're so right."

"I am? On what?"

"The 'Brazen'. I told you she was a potent force--a full-scale powerhouse, in sync and on the line. And I wasn't wrong."

"She's a damned female Ph.D.--two or three times--and she knows all about slipsticks and isotopes and she very definitely is not a cuddly little brunette. Remember?"

"Sure. But what makes you think I'm in love with Temple Bells?"

"What?" Sandra tried to think of one bit of evidence, but could not. "Why ... why...." She floundered, then came up with: "Why, everybody knows it. She says so herself."

"Did you ever hear her say it?"

"Well, perhaps not in so many words. But she told me herself that you were going to be, and I know you are now."

"Your esper sense of endovix, no doubt." Hilton laughed and Sandra went on, furiously:

"She wouldn't keep on acting the way she does if there weren't something to it!"

"What brilliant reasoning! Try again, Sandy."

"That's sheer sophistry, and you know it!"
"It isn't and I don't. And even if, some day, I should find myself in love with her—or with one or both of the twins or Stella or Beverly or you or Sylvia, for that matter—what would it prove? Just that I was wrong; and I admit freely that I was wrong in scoffing at the propinquity. Wonderful stuff, that. You can see it working, all over the ship. On me, even, in spite of my bragging. Without it I'd never have known that you're a better, smarter operator than Eggy Eggleston ever was or ever can be."

* * * * *

Partially mollified despite herself, and highly resentful of the fact, Sandra tried again. "But don't you see, Jarve, that she's just simply playing you for a sucker? Pulling the strings and watching you dance?"

Since he was sure, in his own mind, that she was speaking the exact truth, it took everything he had to keep from showing any sign of how much that truth had hurt. However, he made the grade.

"If that thought does anything for you, Sandy," he said, steadily, "keep right on thinking it. Thank God, the field of thought is still free and open."

"Oh, you...." Sandra gave up.

She had shot her heaviest bolts--the last one, particularly, was so vicious that she had actually been afraid of what its consequences might be--and they had not even dented Hilton's armor. She hadn't even found out that he had any feeling whatever for Temple Bells except as a component of his smoothly-functioning scientific machine.

Nor did she learn any more as time went on. Temple continued to play flawlessly the part of being—if not exactly hopefully, at least not entirely hopelessly—in love with Jarvis Hilton. Her conduct, which at first caused some surprise, many conversations—one of which has been reported verbatim—and no little speculation, became comparatively unimportant as soon as it became evident that nothing would come of it. She apparently expected nothing. He was evidently not going to play footsie with, or show any favoritism whatever toward, any woman aboard the ship.

Thus, it was not surprising to anyone that, at an evening show, Temple sat beside Hilton, as close to him as she could get and as far away as possible from everyone else.

"You can talk, can't you, Jarvis, without moving your lips and without anyone else hearing you?"

"Of course," he replied, hiding his surprise. This was something completely new and completely unexpected, even from unpredictable Temple Bells.

"I want to apologize, to explain and to do anything I can to straighten out the mess I've made. It's true that I joined the project because I've loved you for years—"

"You have nothing to ..."

"Let me finish while I still have the courage." Only a slight tremor in her almost inaudible voice and the rigidity of the fists clenched in her lap betrayed the intensity of her emotion. "I thought I could handle it. Damned fool that I was, I thought I could handle anything. I was sure I could handle myself, under any possible conditions. I was going to put just enough into the act to keep any of these other harpies from getting her hooks into you. But everything got away from me. Out here working with you every day—knowing better every day what you are—well, that Rigoletto episode sunk me, and now I'm in a thousand feet over my head. I hug my pillow at night, dreaming it's you, and the fact that you don't and can't love me is driving me mad. I can't stand it any longer. There's only one thing to do. Fire me first thing in the morning and send me back to Earth in a torp. You've plenty of grounds ..."

"Shut--up."

* * * * *

For seconds Hilton had been trying to break into her hopeless monotone; finally he succeeded. "The trouble with you is, you know altogether too damned much that isn't so." He was barely able to keep his voice down and his eyes front. "What do you think I'm made of—superefract? I thought the whole performance was an act, to prove you're a better man than I am. You talk about dreams. Good God! You don't know what dreams are! If you say one more word about quitting, I'll show you whether I love you or not—I'll squeeze you so hard it'll flatten you out flat!"

"Two can play at that game, sweetheart." Her nostrils flared slightly; her fists clenched—if possible—a fraction tighter; and, even in the distorted medium they were using for speech, she could not subdue completely her quick change into soaring, lilting buoyancy. "While you're doing that I'll see how strong your ribs are. Oh, how this changes things! I've never been half as happy in my whole life as I am right now!"

"Maybe we can work it—if I can handle my end."

"Why, of course you can! And happy dreams are nice, not horrible."

"We'll make it, darling. Here's an imaginary kiss coming at you. Got it?"

"Received in good order, darling. Consumed with gusto and returned in kind."

The show ended and the two strolled out of the room. She walked no closer to him than usual, and no farther away from him. She did not touch him any oftener than she usually did, nor any whit more affectionately or possessively.
And no watching eyes, not even the more than half hostile eyes of Sandra Cummings or the sharply analytical eyes of Stella Wing, could detect any difference whatever in the relationship between worshipful adulatress and tolerantly understanding idol.

The work, which had never moved at any very fast pace, went more and more slowly. Three weeks crawled past.

Most of the crews and all of the teams except the First were working on side issues--tasks which, while important in and of themselves, had very little to do with the project's main problem. Hilton, even without Sandra's help, was all caught up. All the reports had been analyzed, correlated, cross-indexed and filed--except those of the First Team. Since he could not understand anything much beyond midpoint of the first tape, they were all reposing in a box labeled PENDING.

The Navy had torn fifteen of the Oman warships practically to pieces, installing Terran detectors and trying to learn how to operate Oman machinery and armament. In the former they had succeeded very well; in the latter not at all.

Fifteen Oman ships were now out in deep space, patrolling the void in strict Navy style. Each was manned by two or three Navy men and several hundred Omans, each of whom was reveling in delight at being able to do a job for a Master, even though that Master was not present in person.

Several Strett skeleton-ships had been detected at long range, but the detections were inconclusive. The things had not changed course, or indicated in any other way that they had seen or detected the Oman vessels on patrol. If their detectors were no better than the Omans', they certainly hadn't. That idea, however, could not be assumed to be a fact, and the detections had been becoming more and more frequent. Yesterday a squadron of seven--the first time that anything except singles had appeared--had come much closer than any of the singles had ever done. Like all the others, however, these passers-by had not paid any detectable attention to anything Oman; hence it could be inferred that the skeletons posed no threat.

But Sawtelle was making no such inferences. He was very firmly of the opinion that the Stretts were preparing for a massive attack.

Hilton had assured Sawtelle that no such attack could succeed, and Larry had told Sawtelle why. Nevertheless, to keep the captain pacified, Hilton had given him permission to convert as many Oman ships as he liked; to man them with as many Omans as he liked; and to use ships and Omans as he liked.

Hilton was not worried about the Stretts or the Navy. It was the First Team. It was the bottleneck that was slowing everything down to a crawl ... but they knew that. They knew it better than anyone else could, and felt it more keenly. Especially Karns, the team chief. He had been driving himself like a dog, and showed it.

Hilton had talked with him a few times--tried gently to make him take it easy--no soap. He'd have to hunt him up, the next day or so, and slug it out with him. He could do a lot better job on that if he had something to offer ... something really constructive....

That was a laugh. A very unfunny laugh. What could he, Jarvis Hilton, a specifically non-specialist director, do on such a job as that?

Nevertheless, as director, he would have to do something to help Team One. If he couldn't do anything himself, it was up to him to juggle things around so that someone else could.

VI

For one solid hour Hilton stared at the wall, motionless and silent. Then, shaking himself and stretching, he glanced at his clock.

A little over an hour to supper-time. They'd all be aboard. He'd talk this new idea over with Teddy Blake. He gathered up a few papers and was stapling them together when Karns walked in.

"Hi, Bill--speak of the devil! I was just thinking about you."

"I'll just bet you were." Karns sat down, leaned over, and took a cigarette out of the box on the desk. "And nothing printable, either."

"Chip-chop, fellow, on that kind of noise," Hilton said. The team-chief looked actually haggard. Blue-black rings encircled both eyes. His powerful body slumped. "How long has it been since you had a good night's sleep?"

"How long have I been on this job? Exactly one hundred and twenty days. I did get some sleep for the first few weeks, though."

"Yeah. So answer me one question. How much good will you do us after they've wrapped you up in one of those canvas affairs that lace up the back?"

"Huh? Oh ... but damn it, Jarve, I'm holding up the whole procession. Everybody on the project's just sitting around on their tokuses waiting for me to get something done and I'm not doing it. I'm going so slow a snail is lightning in comparison!"
"Calm down, big fellow. Don't rupture a gut or blow a gasket. I've talked to you before, but this time I'm going to smack you bow-legged. So stick out those big, floppy ears of yours and really listen. Here are three words that I want you to pin up somewhere where you can see them all day long: SPEED IS RELATIVE. Look back, see how far up the hill you've come, and then balance one hundred and twenty days against ten years."

"What? You mean you'll actually sit still for me holding everything up for ten years?"

"You use the perpendicular pronoun too much and in the wrong places. On the hits it's 'we', but on the flops it's 'I'. Quit it. Everything on this job is 'we'. Terra's best brains are on Team One and are going to stay there. You will not--repeat NOT--be interfered with, pushed around or kicked around. You see, Bill, I know what you're up against."

"Yes, I guess you do. One of the damned few giving us ten years, how in hell do you think you can swing it? How about the Navy--the Stretts--even the Board?"

"They're my business, Bill, not yours. However, to give you a little boost, I'll tell you. With the Navy, I'll give 'em the Fuel Bin if I have to. The Omans have been taking care of the Stretts for twenty-seven hundred centuries, so I'm not the least bit worried about their ability to keep on doing it for ten years more. And if the Board--or anybody else--sticks their runny little noses into Project Theta Orionis I'll slap a quarantine onto both these solar systems that a microbe couldn't get through!"

"You'd go that far? Why, you'd be ..."

* * * * *

"Do you think I wouldn't?" Hilton snapped. "Look at me, Junior!" Eyes locked and held. "Do you think, for one minute, that I'll let anybody on all of God's worlds pull me off of this job or interfere with my handling of it unless and until I'm damned positively certain that we can't handle it?"

Karns relaxed visibly; the lines of strain eased. "Putting it in those words makes me feel better. I will sleep to-night--and without any pills, either."

"Sure you will. One more thought. We all put in more than ten years getting our Terran educations, and an Oman education is a lot tougher."

Really smiling for the first time in weeks, Karns left the office and Hilton glanced again at his clock. Pretty late now to see Teddy ... besides, he'd better not. She was probably keyed up about as high as Bill was, and in no shape to do the kind of thinking he wanted of her on this stuff. Better wait a couple of days.

On the following morning, before breakfast, Theodora was waiting for him outside the mess-hall. "Morning, you two lovely people." She hugged Hilton's arm as usual. "Shame on you, Teddy. But I wish I had the nerve to kiss him like that."

"Nerve? You?" Teddy laughed as Hilton picked Temple up and kissed her in exactly the same fashion--he hoped!--as he had just kissed Teddy. "You've got more nerve than an aching tooth. But as Jarve would say it, 'scat, kitten'. We're having breakfast a la twosome. We've got things to talk about."

"All right for you," Temple said darkly, although her dazzling smile belied her tone. That first kiss, casual-seeming as it had been, had carried vastly more freight than any observer could perceive. "I'll hunt Bill up and make passes at him, see if I don't. That'll learn ya!"

* * * * *

Theodora and Hilton did have their breakfast a deux--but she did not realize until afterward that he had not answered her question as to what he had done to her Bill.

As has been said, Hilton had made it a prime factor of his job to become thoroughly well acquainted with every member of his staff. He had studied them en masse, in groups and singly. He had never, however, cornered Theodora Blake for individual study. Considering the power and the quality of her mind, and the field which was her speciality, it had not been necessary.

Thus it was with no ulterior motives at all that, three evenings later, he walked her cubby-hole office and tossed the stapled papers onto her desk. "Free for a couple of minutes, Teddy? I've got troubles."

"I'll say you have." Her lovely lips curled into an expression he had never before seen her wear--a veritable sneer. "But these are not them." She tossed the papers into a drawer and stuck out her chin. Her face turned as hard as such a beautiful face could. Her eyes dug steadily into his.

Hilton--inwardly--flinched. His mind flashed backward. She too had been working under stress, of course; but that wasn't enough. What could he have possibly done to put Teddy Blake, of all people, onto such a warpath as this?

"I've been wondering when you were going to try to put me through your wringer," she went on, in the same
cold, hard voice, "and I've been waiting to tell you something. You have wrapped all the other women around your fingers like so many rings--and what a sickening exhibition that has been!--but you are not going to make either a ring or a lap-dog out of me."

Almost but not quite too late Hilton saw through that perfect act. He seized her right hand in both of his, held it up over her head, and waved it back and forth in the sign of victory.

"Socked me with my own club!" he exulted, laughing delightedly, boyishly. "And came within a tenth of a split red hair! If it hadn't been so absolutely out of character you'd've got away with it. What a load of stuff! I was right--of all the women on this project, you're the only one I've ever been really afraid of."

"Oh, damn. Ouch!" She grinned ruefully. "I hit you with everything I had and it just bounced. You're an operator, chief. Hit 'em hard, at completely unexpected angles. Keep 'em staggering, completely off balance. Tell 'em nothing--let 'em deduce your lies for themselves. And it anybody tries to slug you back, like I did just now, duck it and clobber him in another unprotected spot. Watching you work has been not only a delight, but also a liberal education."

* * * * *

"Thanks. I love you, too, Teddy." He lighted two cigarettes, handed her one. "I'm glad, though, to lay it flat on the table with you, because in any battle of wits with you I'm licked before we start."

"Yeah. You just proved it. And after licking me hands down, you think you can square it by swinging the old shovel that way?" She did not quite know whether to feel resentful or not.

"Think over a couple of things. First, with the possible exception of Temple Bells, you're the best brain aboard."

"No. You are. Then Temple. Then there are ..."

"Hold it. You know as well as I do that accurate self-judgment is impossible. Second, the jam we're in. Do I, or don't I, want to lay it on the table with you, now and from here on? Bore into that with your Class A Double-Prime brain. Then tell me." He leaned back, half-closed his eyes and smoked lazily.

She stiffened; narrowed her eyes in concentration; and thought. Finally: "Yes, you do; and I'm gladder of that than you will ever know."

"I think I know already, since you're her best friend and the only other woman I know of in her class. But I came in to kick a couple of things around with you. As you've noticed, that's getting to be my favorite indoor sport. Probably because I'm a sort of jackleg theoretician myself."

"You can frame that, Jarve, as the understatement of the century. But first, you are going to answer that question you sidestepped so neatly."

"What I did to Bill? I finally convinced him that nobody expected the team to do that big a job overnight. That you could have ten years. Or more, if necessary."

"I see." She frowned. "But you and I both know that we can't string it out that long."

He did not answer immediately. "We could. But we probably won't ... unless we have to. We should know, long before that, whether we'll have to switch to some other line of attack. You've considered the possibilities, of course. Have you got anything in shape to do a fine-tooth on?"

"Not yet. That is, except for the ultimate, which is too ghastly to even consider except as an ultimately last resort. Have you?"

"I know what you mean. No, I haven't, either. You don't think, then, that we had better do any collaborative thinking yet?"

"Definitely not. There's altogether too much danger of setting both our lines of thought into one dead-end channel."

"Check. The other thing I wanted from you is your considered opinion as to my job on the organization as a whole. And don't pull your punches. Are we in good shape or not? What can I do to improve the setup?"

* * * * *

"I have already considered that very thing--at great length. And honestly, Jarve, I don't see how it can be improved in any respect. You've done a marvelous job. Much better than I thought possible at first." He heaved a deep sigh of relief and she went on: "This could very easily have become a God-awful mess. But the Board knew what they were doing--especially as to top man--so there are only about four people aboard who realize what you have done. Alex Kincaid and Sandra Cummings are two of them. One of the three girls is very deeply and very truly in love with you."

"Ordinarily I'd say 'no comment', but we're laying on the line ... well ..."

"You'll lay that on the line only if I corkscrew it out you, so I'll Q.E.D. it. You probably know that when Sandy gets done playing around it'll be ..."

"Bounce back, Teddy. She isn't--hasn't been. If anything, too much the opposite. A dedicated-scientist type."
She smiled--a highly cryptic smile. For a man as brilliant and as penetrant in every other respect ... but after all, if the big dope didn't realize that half the women aboard, including Sandy, had been making passes at him, she certainly wouldn't enlighten him. Besides, that one particular area of obtuseness was a real part of his charm. Wherefore she said merely: "I'm not sure whether I'm a bit catty or you're a bit stupid. Anyway, it's Alex she's really in love with. And you already know about Bill and me."

"Of course. He's tops. One of the world's very finest. You're in the same bracket, and as a couple you're a drive fit. One in a million."

"Now I can say 'I love you, too', too." She paused for half a minute, then stubbed out her cigarette and shrugged. "Now I'm going to stick my neck way, way out. You can knock it off if you like. She's a tremendous lot of woman, and if ... well, strong as she is, it'd shatter her to bits. So, I'd like to ask ... I don't quite ... well, is she going to get hurt?"

"Have I managed to hide it that well? From you?"

It was her turn to show relief. "Perfectly. Even--or especially--that time you kissed her. So damned perfectly that I've been scared green. I've been waking myself up, screaming, in the middle of the night. You couldn't let on, of course. That's the hell of such a job as yours. The rest of us can smooch around all over the place. I knew the question was extremely improper--thanks a million for answering it."

"I haven't started to answer it yet. I said I'd lay everything on the line, so here it is. Saying she's a tremendous lot of woman is like calling the Perseus a nice little baby's-bathtub toy boat. I'd go to hell for her any time, cheerfully, standing straight up, wading into brimstone and lava up to the eyeballs. If anything ever hurts her it'll be because I'm not man enough to block it. And just the minute this damned job is over, or even sooner if enough of you couples make it so I can ..."

"Jarvis!" she shrieked. Jumping up, she kissed him enthusiastically. "That's just wonderful!"

* * * * *

He thought it was pretty wonderful, too; and after ten minutes more of conversation he got up and turned toward the door.

"I feel a lot better, Teddy. Thanks for being such a nice pressure-relief valve. Would you mind it too much if I come in and sob on your bosom again some day?"

"I'd love it!" She laughed; then, as he again started to leave: "Wait a minute, I'm thinking ... it'd be more fun to sob on her bosom. You haven't even kissed her yet, have you? I mean really kissed her?"

"You know I haven't. She's the one person aboard I can't be alone with for a second."

"True. But I know of one chaperone who could become deaf and blind," she said, with a broad and happy grin. "On my door, you know, there's a huge invisible sign that says, to everyone except you, 'STOP! BRAIN AT WORK! SILENCE!', and if I were properly approached and sufficiently urged, I might ... I just conceivably might ..."

"Consider it done, you little sweetheart! Up to and including my most vigorous and most insidious attempts at seduction."

"Done. Maneuver your big, husky carcass around here behind the desk so the door can open." She flipped a switch and punched a number. "I can call anybody in here, any time, you know. Hello, dear, this is Teddy. Can you come in for just a few minutes? Thanks." And, one minute later, there came a light tap on the door.

"Come in," Teddy called, and Temple Bells entered the room. She showed no surprise at seeing Hilton. "Hi, chief," she said. "It must be something both big and tough, to have you and Teddy both on it."

"You're so right. It was very big and very tough. But it's solved, darling, so ..."

"Darling?" she gasped, almost inaudibly, both hands flying to her throat. Her eyes flashed toward the other woman.

"Teddy knows all about us--accessory before, during and after the fact."

"Darling!" This time, the word was a shriek. She extended both arms and started forward. Hilton did not bother to maneuver his "big, husky carcass" around the desk, but simply hurdled it, straight toward her.

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Temple Bells was a tall, lithe, strong woman; and all the power of her arms and torso went into the ensuing effort to crack Hilton's ribs. Those ribs, however, were highly capable structural members; and furthermore, they were protected by thick slabs of hard, hard muscle. And, fortunately, he was not trying to fracture her ribs. His pressures were distributed much more widely. He was, according to promise, doing his very best to flatten her whole resilient body out flat.

And as they stood there, locked together in sheerest ecstasy, Theodora Blake began openly and unashamedly to cry.
It was Temple who first came up for air. She wriggled loose from one of his arms, felt of her hair and gazed unseeingly into her mirror. "That was wonderful, sweetheart," she said then, shakily. "And I can never thank you enough, Teddy. But we can't do this very often ... can we?" The addendum fairly begged for contradiction.

"Not too often, I'm afraid," Hilton said, and Theodora agreed....

"Well," the man said, somewhat later, "I'll leave you two ladies to your knitting, or whatever. After a couple of short ones for the road, that is."

"Not looking like that!" Teddy said, sharply. "Hold still and we'll clean you up." Then, as both girls went to work:

"If anybody ever sees you coming out of this office looking like that," she went on, darkly, "and Bill finds out about it, he'll think it's my lipstick smeared all over you and I'll strangle you to death with my bare hands!"

"And that was supposed to be kissproof lipstick, too," Temple said, seriously--although her whole face glowed and her eyes danced. "You know, I'll never believe another advertisement I read."

"Oh, I wouldn't go so far as to say that, if I were you." Teddy's voice was gravity itself, although she, too, was bubbling over. "It probably is kissproof. I don't think 'kissing' is quite the word for the performance you just staged. To stand up under such punishment as you gave it, my dear, anything would have to be tattooed in, not just put on."

"Hey!" Hilton protested. "You promised to be deaf and blind!"

"I did no such thing. I said 'could', not 'would'. Why, I wouldn't have missed that for anything!"

When Hilton left the room he was apparently, in every respect, his usual self-contained self. However, it was not until the following morning that he so much as thought of the sheaf of papers lying unread in the drawer of Theodora Blake's desk.

VII

Knowing that he had done everything he could to help the most important investigations get under way, Hilton turned his attention to secondary matters. He made arrangements to decondition Javo, the Number Two Oman Boss, whereupon that worthy became Javvy and promptly "bumped" the Oman who had been shadowing Karns.

Larry and Javvy, working nights, deconditioned all the other Omans having any contact with BuSci personnel; then they went on to set up a routine for deconditioning all Omans on both planets.

Assured at last that the Omans would thenceforth work with and really serve human beings instead of insisting upon doing their work for them, Hilton knew that the time had come to let all his BuSci personnel move into their homes agrid. Everyone, including himself, was fed up to the gozzel with spaceship life--its jam-packed crowding; its flat, reprocessed air; its limited variety of uninteresting food. Conditions were especially irksome since everybody knew that there was available to all, whenever Hilton gave the word, a whole city full of all the room anyone could want, natural fresh air and--so the Omans had told them--an unlimited choice of everything anyone wanted to eat.

Nevertheless, the decision was not an easy one to make.

Living conditions were admittedly not good on the ship. On the other hand, with almost no chance at all of solitude--the few people who had private offices aboard were not the ones he worried about--there was no danger of sexual trouble. Strictly speaking, he was not responsible for the morals of his force. He knew that he was being terribly old-fashioned. Nevertheless, he could not argue himself out of the conviction that he was morally responsible.

Finally he took the thing up with Sandra, who merely laughed at him. "How long have you been worrying about that, Jarve?"
“Ever since I okayed moving aground the first time. That was one reason I was so glad to cancel it then.”
“You were slightly unclear--a little rattled? But which factor--the fun and games, which is the moral issue, or the consequences?”
“The consequences,” he admitted, with a rueful grin. “I don't give a whoop how much fun they have; but you know as well as I do just how prudish public sentiment is. And Project Theta Orionis is squarely in the middle of the public eye.”

* * * * *

“You should have checked with me sooner and saved yourself wear and tear. There's no danger at all of consequences--except weddings. Lots of weddings, and fast.”

“Weddings and babies wouldn't bother me a bit. Nor interfere with the job too much, with the Omans as nurses. But why the 'fast', if you aren't anticipating any shotgun weddings?”

“Female psychology,” she replied, with a grin. “Aboard-ship here there's no home atmosphere whatever; nothing but work, work, work. Put a woman into a house, though--especially such houses as the Omans have built and with such servants as they insist on being--and she goes domestic in a really big way. Just sex isn't good enough any more. She wants the kind of love that goes with a husband and a home, and nine times out of ten she gets it. With these BuSci women it'll be ten out of ten.”

“You may be right, of course, but it sounds kind of far-fetched to me.”

“Wait and see, chum,” Sandra said, with a laugh.

Hilton made his announcement and everyone moved aground the next day. No one, however, had elected to live alone. Almost everyone had chosen to double up; the most noteworthy exceptions being twelve laboratory girls who had decided to keep on living together. However, they now had a twenty-room house instead of a one-room dormitory to live in, and a staff of twenty Oman girls to help them do it.

Hilton had suggested that Temple and Teddy, whose house was only a hundred yards or so from the Hilton-Karns bungalow, should have supper and spend the first evening with them; but the girls had knocked that idea flat. Much better, they thought, to let things ride as nearly as possible exactly as they had been aboard the Perseus.

“A little smooching now and then, on the Q strictly T, but that's all, darling. That's positively all,” Temple had said, after a highly satisfactory ten minutes alone with him in her own gloriously private room, and that was the way it had to be.

Hence it was a stag inspection that Hilton and Karns made of their new home. It was very long, very wide, and for its size very low. Four of its five rooms were merely adjuncts to its tremendous living-room. There was a huge fireplace at each end of this room, in each of which a fire of four-foot-long fir cordwood crackled and snapped. There was a great hi-fi tri-di, with over a hundred tapes, all new.

“Yes, sirs,” Larry and Javvy spoke in unison. "The players and singers who entertained the Masters of old have gone back to work. They will also, of course, appear in person whenever and wherever you wish."

* * * * *

Both men looked around the vast room and Karns said: "All the comforts of home and a couple of bucks' worth besides. Wall-to-wall carpeting an inch and a half thick. A grand piano. Easy chairs and loafers and davenports. Very fine reproductions of our favorite paintings ... and statuary."

“You said it, brother.” Hilton was bending over a group in bronze. "If I didn't know better, I'd swear this is the original deHaven 'Dance of the Nymphs'.”

Karns had marched up to and was examining minutely a two-by-three-foot painting, in a heavy gold frame, of a gorgeously auburn-haired nude. "Reproduction, hell! This is a duplicate! Lawrence's 'Innocent' is worth twenty million wogs and it's sealed behind quad armor-glass in Prime Art--but I'll bet wogs to wiggles the Prime Curator himself, with all his apparatus, couldn't tell this one from his!"

"I wouldn't take even one wiggle's worth of that. And this 'Laughing Cavalier' and this 'Toledo' are twice as old and twice as fabulously valuable."

"And there are my own golf clubs...."

"Excuse us, sirs," the Omans said, "These things were simple because they could be induced in your minds. But the matter of a staff could not, nor what you would like to eat for supper, and it is growing late."

"Staff? What the hell has the staff got to do with ..."

"House-staff, they mean," Karns said. "We don't need much of anybody, boys. Somebody to keep the place shipshape, is all. Or, as a de luxe touch, how about a waitress? One housekeeper and one waitress. That'll be finer."

"Very well, sirs. There is one other matter. It has troubled us that we have not been able to read in your minds the logical datum that they should in fact simulate Doctor Bells and Doctor Blake?"

"Huh?" Both men gasped--and then both exploded like one twelve-inch length of primacord.

* * * * *
While the Omans could not understand this purely Terran reasoning, they accepted the decision without a
demurring thought. "Who, then, are the two its to simulate?"
"No stipulation; roll your own," Hilton said, and glanced at Karns. "None of these Oman women are really hard
on the eyes."
"Check. Anybody who wouldn't call any one of 'em a slurpy dish needs a new set of optic nerves."
"In that case," the Omans said, "no delay at all will be necessary, as we can make do with one temporarily. The
Sory, no longer Sora, who has not been glad since the Tuly replaced it, is now in your kitchen. It comes."
A woman came in and stood quietly in front of the two men, the wafted air carrying from her clear, smooth skin
a faint but unmistakable fragrance of Idaho mountain syringa. She was radiantly happy; her bright, deep-green eyes
went from man to man.
"You wish, sirs, to give me your orders verbally. And yes, you may order fresh, whole, not-canned hens' eggs."
"I certainly will, then; I haven't had a fried egg since we left Terra. But ... Larry said ... you aren't Sory!"
"Oh, but I am, sir."
Karns had been staring her, eyes popping. "Holy Saint Patrick! Talk about simulation, Jarve! They've made her
over into Lawrence's 'Innocent'--exact to twenty decimals!"
"Oh, I did it day before yesterday. As soon as Javvy materialized the 'Innocent' and I knew it to be your favorite
art."
"But damn it, we hadn't even thought of having you here then!"
"But I had, sir. I fully intended to serve, one way or another, in this your home. But of course I had no idea I
would ever have such an honor as actually waiting on you at your table. Will you please give me your orders, sirs,
besides the eggs? You wish the eggs fried in butter--three of them apiece--and sunny side up."
"Same for me," Karns said, "but only half as much horseradish."
"And for the rest of it," Hilton went on, "hashed-brown potatoes and buttered toast--plenty of extra butter--
strong coffee from first to last. Whipping cream and sugar on the side. For dessert, apple pie a la mode."
"You make me drool, chief. Play that for me, please, Innocent, all the way."
"Uh-huh, with ham," Hilton said. "I'll start with a jumbo shrimp cocktail. Horseradish and ketchup sauce; heavy
on the horseradish."
"Why I did it, sir. Simply unbelievable. I thank you! I thank you!" Radiating happiness, she
ached away toward the kitchen.
When the two men were full of food, they strolled over to a davenport facing the fire. As they sat down,
Innocent entered the room, carrying a tall, dewy mint julep on a tray. She was followed by another female figure
bearing a bottle of avignognac and the appurtenances which are its due--and at the first full sight of that figure
Hilton stopped breathing for fifteen seconds.
"Murchison's Dark Lady!" Hilton gasped. "Larry! You've--we've--I've got that painting here?"
"Oh, yes, sir." The newcomer spoke before Larry could. "At the other end--your part--of the room. You will
look now, sir, please?" Her voice was low, rich and as smooth as cream.
Putting her tray down carefully on the end-table, she led him toward the other fireplace. Past the piano, past the
tri-di pit; past a towering grillwork holding art treasures by the score. Over to the left, against the wall, there was a
big, business-like desk. On the wall, over the desk, hung the painting; a copy of which had been in Hilton's room for over eight years.

He stared at it for at least a minute. He glanced around: at the other priceless duplicates so prodigally present, at his own guns arrayed above the mantel and on each side of the fireplace. Then, without a word, he started back to join Karns. She walked springily beside him.

"What's your name, Miss?" he asked, finally.
"I haven't earned any as yet, sir. My number is ..."
"Never mind that. Your name is 'Dark Lady'." 
"Oh, thank you, sir; that is truly wonderful!" And Dark Lady sat cross-legged on the rug at Hilton's feet and busied herself with the esoteric rites of Old Avignon.

Hilton took a deep inhalation and a small sip, then stared at Karns. Karns, over the rim of his glass, stared back. "I can see where this would be habit-forming," Hilton said, "and very deadly. Extremely deadly."

"Every wish granted. Surrounded by all this," Karns swept his arm through three-quarters of a circle. "Waited on hand and foot by powerful men and by the materializations of the dreams of the greatest, finest artists who ever lived. Fatal? I don't know...."

* * * * *

"My solid hope is that we never have to find out. And when you add in Innocent and Dark Lady.... They look to be seventeen, but the thought that they're older than the hills of Rome and powered by everlasting atomic engines--" He broke off suddenly and blushed. "Excuse me, please, girls. I know better than to talk about people that way, right in front of them; I really do."

"Do you really think we're people?" Innocent and Dark Lady squealed, as one.
That set Hilton back onto his heels. "I don't know.... I've wondered. Are you?"
Both girls, silent, looked at Larry.

"We don't know, either," Larry said. "At first, of course, there were crude, non-thinking machines. But when the Guide attained its present status, the Masters themselves could not agree. They divided about half and half on the point. They never did settle it any closer than that."

"I certainly won't try to, then. But for my money, you are people," Hilton said, and Karns agreed.
That, of course, touched off a near-riot of joy; after which the two men made an inch-by-inch study of their tremendous living-room. Then, long after bedtime, Larry and Dark Lady escorted Hilton to his bedroom. 

"Do you mind, sir, if we sleep on the floor at the sides of your bed?" Larry asked. "Or must we go out into the hall?"

"Sleep? I didn't know you could sleep."

"It is not essential. However, when round-the-clock work is not necessary, and we have opportunity to sleep near a human being, we derive a great deal of pleasure and satisfaction from it. You see, sir, we also serve during sleep."

"Okay, I'll try anything once. Sleep wherever you please."

Hilton began to peel, but before he had his shirt off both Larry and Dark Lady were stretched out flat, sound asleep, one almost under each edge of his bed. He slid in between the sheets—it was the most comfortable bed he had ever slept in—and went to sleep as though sandbagged.

He had time to wonder foggily whether the Omans were in fact helping him go to sleep—and then he was asleep.

* * * * * 

A month passed. Eight couples had married, the Navy chaplain officiating—in the Perseus, of course, since the warship was, always and everywhere, an integral part of Terra.

Sandra had dropped in one evening to see Hilton about a bit of business. She was now sitting, long dancer's legs out-stretched toward the fire, with a cigarette in her left hand and a tall, cold drink on a coaster at her right.

"This is a wonderful room, Jarvis. It'd be perfect if it weren't quite so ... so mannish."

"What do you expect of Bachelors' Hall—a boudoir? Don't tell me you're going domestic, Sandy, just because you've got a house?"

"Not just that, no. But of course it helped it along."

"Alex is a mighty good man. One of the finest I have ever known."

She eyed him for a moment in silence. "Jarvis Hilton, you are one of the keenest, most intelligent men who ever lived. And yet ...." She broke off and studied him for a good half minute. "Say, if I let my hair clear down, will you?"

"Scout's Oath. That 'and yet' requires elucidation at any cost."

"I know. But first, yes, it's Alex. I never would have believed that any man ever born could hit me so hard. Soon. I didn't want to be the first, but I won't be anywhere near the last. But tell me. You were really in love with
Temple, weren't you, when I asked you?"
"Yes."
"Ha! You are letting your hair down! That makes me feel better."
"Huh? Why should it?"
"It elucidates the 'and yet' no end. You were insulated from all other female charms by ye brazen Bells. You see, most of us assistants made a kind of game out of seeing which of us could make you break the Executives' Code. And none of us made it. Teddy and Temple said you didn't know what was going on; Bev and I said nobody as smart as you are could possibly be that stupid."
"You aren't the type to leak or name names--oh, I see. You are merely reporting a conversation. The game had interested, but non-participating, observers. Temple and Teddy, at least."
"At least," she agreed. "But damn it, you aren't stupid. There isn't a stupid bone in your head. And if so, what about marriage? Why don't you and Temple make it a double with Alex and me?"
"That's the most cogent thought you ever had, but setting the date is the bride's business." He glanced at his Oman wristwatch. "It's early yet; let's skip over. I wouldn't mind seeing her a minute or two."
"Thy statement ringeth with truth, friend. Bill's there with Teddy?"
"I imagine so."
"So we'll talk to them about making it a triple. Oh, nice--let's go!"
They left the house and, her hand tucked under his elbow, walked up the street.

* * * * *

Next morning, on her way to the Hall of Records, Sandra stopped off as usual at the office. The Omans were all standing motionless. Hilton was leaning far back in his chair, feet on desk, hands clasped behind head, eyes closed. Knowing what that meant, she turned and started back out on tiptoe.

However, he had heard her. "Can you spare a couple of minutes to think at me, Sandy?"
"Minutes or hours, chief." Tuly placed a chair for her and she sat down, facing him across his desk.
"Thanks, gal. This time it's the Stretts. Sawtelle's been having nightmares, you know, ever since we emerged, about being attacked, and I've been pooh-poohing the idea. But now it's a statistic that the soup is getting thicker, and I can't figure out why. Why in all the hells of space should a stasis that has lasted for over a quarter of a million years be broken at this exact time? The only possible explanation is that we caused the break. And any way I look at that concept, it's plain idiocy."

Both were silent for minutes; and then it was demonstrated again that Terra's Advisory Board had done better than it knew in choosing Sandra Cummings to be Jarvis Hilton's working mate.
"We did cause it, Jarve," she said, finally. "They knew we were coming, even before we got to Fuel Bin. They knew we were human and tried to wipe out the Omans before we got there. Preventive warfare, you know."
"They couldn't have known!" he snorted. "Strett detectors are no better than Oman, and you know what Sam Bryant had to say about them."
"I know." Sandra grinned appreciatively. "It's becoming a classic. But it couldn't have been any other way. Besides, I know they did."
He stared at her helplessly, then swung on Larry. "Does that make sense to you?"
"Yes, sir. The Stretts could peyondire as well as the old Masters could, and they undoubtedly still can and do."
"Okay, it does make sense, then." He absented himself in thought, then came to life with a snap. "Okay! The next thing on the agenda is a crash-priority try at a peyondix team. Tuly, you organized a team to generate sathura. Can you do the same for peyondix?"
"If we can find the ingredients, yes, sir."

* * * * *
"I had a hunch. Larry, please ask Teddy Blake's Oman to bring her in here...."
"I'll be running along, then." Sandra started to get up.
"I hope to kiss a green pig you won't!" Hilton snapped. "You're one of the biggest wheels. Larry, we'll want Temple Bells and Beverly Bell--for a start."
"Chief, you positively amaze me," Sandra said then. "Every time you get one of these attacks of genius--or whatever it is--you have me gasping like a fish. Just what can you possibly want of Bev Bell?"
"Whatever it was that enabled her to hit the target against odds of almost infinity to one; not just once, but time after time. By definition, intuition. What quality did you use just now in getting me off the hook? Intuition. What makes Teddy Blake such an unerring performer? Intuition again. My hunches--they're intuition, too. Intuition, hell! Labels--based on utterly abysmal damned dumb ignorance of our own basic frames of reference. Do you think those four kinds of intuition are alike, by seven thousand rows of apple trees?"
"Of course not. I see what you're getting at.... Oh! This'll be fun!"
The others came in and, one by one, Tuly examined each of the four women and the man. Each felt the probing, questioning feelers of her thought prying into the deepest recesses of his mind.

"There is not quite enough of each of three components, all of which are usually associated with the male. You, sir, have much of each, but not enough. I know your men quite well, and I think we will need the doctors Kincaid and Karns and Poynter. But such deep probing is felt. Have I permission, sir?"

"Yes. Tell 'em I said so."
Tuly scanned. "Yes, sir, we should have all three."
"Get 'em, Larry." Then, in the pause that followed: "Sandy, remember yowling about too many sweeties on a team? What do you think of this business of all sweeties?"

"All that proves is that nobody can be wrong all the time," she replied flippantly.

The three men arrived and were instructed. Tuly said: "The great trouble is that each of you must use a portion of your mind that you do not know you have. You, this one. You, that one. Tuly probed mercilessly; so poignantly that each in turn flinched under brand-new and almost unbearable pain. "With you, Doctor Hilton, it will be by far the worst. For you must learn to use almost all the portions of both your minds, the conscious and the unconscious. This must be, because you are the actual peyondixer. The others merely supply energies in which you yourself are deficient. Are you ready for a terrible shock, sir?"

"Shoot."

* * * * *

He thought for a second that he had been shot; that his brain had blown up.

He couldn't stand it--he knew he was going to die--he wished he could die--anything, anything whatever, to end this unbearable agony. ...

It ended.

Wringing, white and sweating, Hilton opened his eyes. "Ouch," he remarked, conversationally. "What next?"

"You will seize hold of the energies your friends offer. You will bind them to yours and shape the whole into a dimensionless sphere of pure controlled, dirigible energy. And, as well as being the binding force, the cohesiveness, you must also be the captain and the pilot and the astrogator and the ultimately complex computer itself."

"But how can I. . . . Okay, damn it. I will!"

"Of course you will, sir. Remember also that once the joinings are made I can be of very little more assistance, for my peyondix is as nothing compared to that of your fusion of eight. Now, to assemble the energies and join them you will, all together, deny the existence of the sum total of reality as you know it. Distance does not exist--every point in the reachable universe coincides with every other point and that common point is the focus of your attention. You can be and actually are anywhere you please or everywhere at once. Time does not exist. Space does not exist. There is no such thing as opacity; everything is perfectly transparent, yet every molecule of substance is perceptible in its relationship to every other molecule in the cosmos. Senses do not exist. Sight, hearing, taste, touch, smell, sathurna, endovix--all are parts of the one great sense of peyondix. I am guiding each of you seven--closer! Tighter! There! Seize it, sir--and when you work the Stretts you must fix it clearly that time does not exist. You must work in millionths of microseconds instead of in minutes, for they have minds of tremendous power. Reality does not exist! Compress it more, sir. Tighter! Smaller! Rounder! There! Hold it! Reality does not exist--distance does not exist--all possible points are.... Wonderful!"

Tuly screamed the word and the thought: "Good-by! Good luck!"

VIII

Hilton did not have to drive the peyondix-beam to the planet Strett; it was already there. And there was the monstrous First Lord Thinker Zoyar.

Into that mind his multi-mind flashed, its every member as responsive to his will as his own fingers--almost infinitely more so, in fact, because of the tremendous lengths of time required to send messages along nerves.

That horrid mind was scanned cell by cell. Then, after what seemed like a few hours, when a shield began sluggishly to form, Hilton transferred his probe to the mind of the Second Thinker, one Lord Ynos, and absorbed everything she knew. Then, the minds of all the other Thinkers being screened, he studied the whole Strett planet, foot by foot, and everything that was on it.

Then, mission accomplished, Hilton snapped his attention back to his office and the multi-mind fell apart. As he opened his eyes he heard Tuly scream: "... Luck!"

"Oh--you still here, Tuly? How long have we been gone?"

"Approximately one and one-tenth seconds, sir."

"WHAT!"

Beverly Bell, in the haven of Franklin Poynter's arms, fainted quietly. Sandra shrieked piercingly. The four men
stared, goggle-eyed. Temple and Teddy, as though by common thought, burrowed their faces into brawny shoulders.

Hilton recovered first. "So that's what peyondix is."

"Yes, sir--I mean no, sir. No, I mean yes, but ..." Tuly paused, licking her lips in that peculiarly human-female gesture of uncertainty.

"Well, what do you mean? It either is or isn't. Or is that necessarily so?"

"Not exactly, sir. That is, it started as peyondix. But it became something else. Not even the most powerful of the old Masters--nobody--ever did or ever could possibly generate such a force as that. Or handle it so fast."

"Well, with seven of the best minds of Terra and a ..."

"Chip-chop the chit-chat!" Karns said, harshly. "What I want to know is whether I was having a nightmare. Can there possibly be a race such as I thought I saw? So utterly savage--ruthless--merciless! So devoid of every human trace and so hell-bent determined on the extermination of every other race in the Galaxy? God damn it, it simply doesn't make sense!"

* * * * *

Eyes went from eyes to eyes to eyes. All had seen the same indescribably horrible, abysmally atrocious, things. Qualities and quantities and urges and drives that no words in any language could even begin to portray.

"It doesn't seem to, but there it is." Teddy Blake shook her head hopelessly.

Big Bill Karns, hands still shaking, lit a cigarette before he spoke again. "Well, I've never been a proponent of genocide. But it's my considered opinion that the Stretts are one race the galaxy can get along without."

"A hell of a lot better without," Poynter said, and all agreed.

"The point is, what can we do about it?" Kincaid asked. "The first thing, I would say, is to see whether we can do this--whatever it is--without Tuly's help. Shall we try it? Although I, for one, don't feel like doing it right away."

"Not I, either." Beverly Bell held up her right hand, which was shaking uncontrollably. "I feel as though I'd been bucking waves, wind and tide for forty-eight straight hours without food, water or touch. Maybe in about a week I'll be ready for another try at it. But today--not a chance!"

"Okay. Scat, all of you," Hilton ordered. "Take the rest of the day off and rest up. Put on your thought-screens and don't take them off for a second from now on. Those Stretts are tough hombres."

Sandra was the last to leave. "And you, boss?" she asked pointedly.

"I've got some thinking to do."

"I'll stay and help you think?"

"Not yet." He shook his head, frowned and then grinned. "You see, chick, I don't even know yet what it is I'm going to have to think about."

"A bit unclear, but I know what you mean--I think. Luck, chief."

* * * * *

In their subterranean sanctum turn on distant Strett, two of the deepest thinkers of that horribly unhuman race were in coldly intent conference via thought.

"My mind has been plundered, Ynos," First Lord Thinker Zoyar radiated, harshly. "Despite the extremely high reactivity of my shield some information--I do not know how much--was taken. The operator was one of the humans of that ship."

"I, too, felt a plucking at my mind. But those humans could not peyondire, First Lord."

"Be logical, fool! At that contact, in the matter of which you erred in not following up continuously, they succeeded in concealing their real abilities from you."

"That could be the truth. Our ancestors erred, then, in recording that all those weak and timid humans had been slain. These offenders are probably their descendants, returning to reclaim their former world."

"The probability must be evaluated and considered. Was it or was it not through human aid that the Omans destroyed most of our task-force?"

"Highly probable, but impossible of evaluation with the data now available."

"Obtain more data at once. That point must be and shall be fully evaluated and fully considered. This entire situation is intolerable. It must be abated."

"True, First Lord. But every operator and operation is now tightly screened. Oh, if I could only go out there myself ..."

"Hold, fool! Your thought is completely disloyal and un-Strettly."

"True, oh First Lord Thinker Zoyar. I will forthwith remove my unworthy self from this plane of existence."

"You will not! I hereby abolish that custom. Our numbers are too few by far. Too many have failed to adapt. Also, as Second Thinker, your death at this time would be slightly detrimental to certain matters now in work. I will myself, however, slay the unfit. To that end repeat The Words under my peyondiring."
"I am a Strett. I will devote my every iota of mental and of physical strength to forwarding the Great Plan. I am, and will remain, a Strett."

"You do believe in The Words."

"Of course I believe in them! I know that in a few more hundreds of thousands of years we will be rid of material bodies and will become invincible and invulnerable. Then comes the Conquest of the Galaxy ... and then the Conquest of the Universe!"

"No more, then, on your life, of this weak and cowardly repining! Now, what of your constructive thinking?"

"Programming must be such as to obviate time-lag. We must evaluate the factors already mentioned and many others, such as the reactivation of the spacecraft which was thought to have been destroyed so long ago. After having considered all these evaluations, I will construct a Minor Plan to destroy these Omans, whom we have permitted to exist on sufferance, and with them that shipload of despicably interloping humans."

"That is well." Zoyar's mind seethed with a malevolent ferocity starkly impossible for any human mind to grasp. "And to that end?"

"To that end we must intensify still more our program of procuring data. We must revise our mechs in the light of our every technological advance during the many thousands of cycles since the last such revision was made. Our every instrument of power, of offense and of defense, must be brought up to the theoretical ultimate of capability."

"And as to the Great Brain?"

"I have been able to think of nothing, First Lord, to add to the undertakings you have already set forth."

"It was not expected that you would. Now: is it your final thought that these interlopers are in fact the descendants of those despised humans of so long ago?"

"It is."

"It is also mine. I return, then, to my work upon the Brain. You will take whatever measures are necessary. Use every artifice of intellect and of ingenuity and our every resource. But abate this intolerable nuisance, and soon."

"It shall be done, First Lord."

The Second Thinker issued orders. Frenzied, round-the-clock activity ensued. Hundreds of mechs operated upon the brains of hundreds of others, who in turn operated upon the operators.

Then, all those brains charged with the technological advances of many thousands of years, the combined hundreds went unrestingly to work. Thousands of work-mechs were built and put to work at the construction of larger and more powerful space-craft.

As has been implied, those battle-skeletons of the Stretts were controlled by their own built-in mechanical brains, which were programmed for only the simplest of battle maneuvers. Anything at all out of the ordinary had to be handled by remote control, by the specialist-mechs at their two-miles-long control board.

This was now to be changed. Programming was to be made so complete that almost any situation could be handled by the warship or the missile itself—instantly.

The Stretts knew that they were the most powerful, the most highly advanced race in the universe. Their science was the highest in the universe. Hence, with every operating unit brought up to the full possibilities of that science, that would be more than enough. Period.

This work, while it required much time, was very much simpler than the task which the First Thinker had laid out for himself on the giant computer-plus which the Stretts called "The Great Brain." In stating his project, First Lord Zoyar had said:

"Assignment: To construct a machine that will have the following abilities: One, to contain and retain all knowledge and information fed into it, however great the amount. Two, to feed itself additional information by peyondiring all planets, wherever situate, bearing intelligent life. Three, to call up instantly any and all items of information pertaining to any problem we may give it. Four, to combine and recombine any number of items required to form new concepts. Five, to formulate theories, test them and draw conclusions helpful to us in any matter in work."

It will have been noticed that these specifications vary in one important respect from those of the Eniacs and Univacs of Earth. Since we of Earth can not peyondire, we do not expect that ability from our computers.

The Stretts could, and did.

When Sandra came back into the office at five o'clock she found Hilton still sitting there, in almost exactly the same position.

"Come out of it, Jarve!" She snapped a finger. "That much of that is just simply too damned much."

"You're so right, child." He got up, stretched, and by main strength shrugged off his foul mood. "But we're up
against something that is really a something, and I don't mean perchance."

"How well I know it." She put an arm around him, gave him a quick, hard hug. "But after all, you don't have to
solve it this evening, you know."

"No, thank God."

"So why don't you and Temple have supper with me? Or better yet, why don't all eight of us have supper
together in that bachelors' paradise of yours and Bill's?"

"That'd be fun."

And it was.

Nor did it take a week for Beverly Bell to recover from the Ordeal of Eight. On the following evening, she
herself suggested that the team should take another shot at that utterly fantastic terra incognita of the multiple mind,
jolting though it had been.

"But are you sure you can take it again so soon?" Hilton asked.

"Sure. I'm like that famous gangster's moll, you know, who bruised easy but healed quick. And I want to know
about it as much as anyone else does."

They could do it this time without any help from Tuly. The linkage fairly snapped together and shrank
instantaneously to a point. Hilton thought of Terra and there it was; full size, yet occupying only one infinitesimal
section of a dimensionless point. The multi-mind visited relatives of all eight, but could not make intelligible
contact. If asleep, it caused pleasant dreams; if awake, pleasant thoughts of the loved one so far away in space; but
that was all. It visited mediums, in trance and otherwise--many of whom, not surprisingly now, were genuine--with
whom it held lucid conversations. Even in linkage, however, the multi-mind knew that none of the mediums would
be believed, even if they all told, simultaneously, exactly the same story. The multi-mind weakened suddenly and
Hilton snapped it back to Ardry.

Beverly was almost in collapse. The other girls were white, shaken and trembling. Hilton himself, strong and
rugged as he was, felt as though he had done two weeks of hard labor on a rock-pile. He glanced questioningly at
Larry.

"Point six three eight seconds, sir," the Omans said, holding up a millisecond timer.

"How do you explain that?" Karns demanded.

"I'm afraid it means that without Oman backing we're out of luck."

Hilton had other ideas, but he did not voice any of them until the following day, when he was rested and had
Larry alone.

"So carbon-based brains can't take it. One second of that stuff would have killed all eight of us. Why? The
Masters had the same kind of brains we have."

"I don't know, sir. It's something completely new. No Master, or group of Masters, ever generated such a force
as that. I can scarcely believe such power possible, even though I have felt it twice. It may be that over the
gen erations your individual powers, never united or controlled, have developed so strength that no human can
handle them in fusion."

"And none of us ever knew anything about any of them. I've been doing a lot of thinking. The Masters had
qualities and abilities now unknown to any of us. How come? You Omans--and the Stretts, too--think we're
descendants of the Masters. Maybe we are. You think they came originally from Arth--Earth or Terra--to Ardu.
That'd account for our legends of Mu, Atlantis and so on. Since Ardu was within peyondix range of Strett, the Stretts
attacked it. They killed all the Masters, they thought, and made the planet uninhabitable for any kind of life, even
their own. But one shipload of Masters escaped and came here to Ardry--far beyond peyondix range. They stayed
here for a long time. Then, for some reason or other--which may be someplace in their records--they left here, fully
intending to come back. Do any of you Omans know why they left? Or where they went?"

"No, sir. We can read only the simplest of the Masters' records. They arranged our brains that way, sir."

"I know. They're the type. However, I suspect now that your thinking is reversed. Let's turn it around. Say the
Masters didn't come from Terra, but from some other planet. Say that they left here, fully intending to come back.
Do any of you Omans know why they left? Or where they went?"

"Yes, sir. Their numbers became fewer and fewer each century."

"I was sure of it. They were committing race suicide by letting you Omans do everything they themselves
should have been doing. Finally they saw the truth. In a desperate effort to save their race they pulled out, leaving
you here. Probably they intended to come back when they had bred enough guts back into themselves to set you
Omans down where you belong...."

"But they were always the Masters, sir!"

"They were not! They were hopelessly enslaved. Think it over. Anyway, say they went to Terra from here. That
still accounts for the legends and so on. However, they were too far gone to make a recovery, and yet they had enough fixity of purpose not to manufacture any of you Omans there. So their descendants went a long way down the scale before they began to work back up. Does that make sense to you?"

"It explains many things, sir. It can very well be the truth."

"Okay. However it was, we're here, and facing a condition that isn't funny. While we were teamed up I learned a lot, but not nearly enough. Am I right in thinking that I now don't need the other seven at all--that my cells are fully charged and I can go it alone?"

"Probably, sir, but ..."

"I'm coming to that. Every time I do it--up to maximum performance, of course--it comes easier and faster and hits harder. So next time, or maybe the fourth or fifth time, it'll kill me. And the other seven, too, if they're along."

"I'm not sure, sir, but I think so."

"Nice. Very, very nice." Hilton got up, shoved both hands into his pockets, and prowled about the room. "But can't the damned stuff be controlled? Choked--throttled down--damped--muzzled, some way or other?"

"We do not know of any way, sir. The Masters were always working toward more power, not less."

"That makes sense. The more power the better, as long as you can handle it. But I can't handle this. And neither can the team. So how about organizing another team, one that hasn't got quite so much whammo? Enough punch to do the job, but not enough to backfire that way?"

"It is highly improbable that such a team is possible, sir." If an Oman could be acutely embarrassed, Larry was. "That is, sir ... I should tell you, sir ..."

"You certainly should. You've been stalling all along, and now you're stalled. Spill it."

"Yes, sir. The Tuly begged me not to mention it, but I must. When it organized your team it had no idea of what it was really going to do...."

"Let's talk the same language, shall we? Say 'he' and 'she.' Not 'it.'"

"She thought she was setting up the peyondix, the same as all of us Omans have. But after she formed in your mind the peyondix matrix, your mind went on of itself to form a something else; a thing we can not understand. That was why she was so extremely ... I think 'frightened' might be your term."

"I knew something was biting her. Why?"

"Because it very nearly killed you. You perhaps have not considered the effect upon us all if any Oman, however unintentionally, should kill a Master?"

"No, I hadn't ... I see. So she won't play with fire any more, and none of the rest of you can?"

"Yes, sir. Nothing could force her to. If she could be so coerced we would destroy her brain before she could act. That brain, as you know, is imperfect, or she could not have done what she did. It should have been destroyed long since."

"Don't ever act on that assumption, Larry," Hilton thought for minutes. "Simple peyondix, such as yours, is not enough to read the Masters' records. If I'd had three brain cells working I'd've tried them then. I wonder if I could read them?"

"You have all the old Masters' powers and more. But you must not assemble them again, sir. It would mean death."

"But I've got to know.... I've got to know! Anyway, a thousandth of a second would be enough. I don't think that'd hurt me very much."

"He concentrated--read a few feet of top-secret braided wire--and came back to consciousness in the sickbay of the Perseus, with two doctors working on him; Hastings, the top Navy medico, and Flandres, the surgeon.

"What the hell happened to you?" Flandres demanded. "Were you trying to kill yourself?"

"And if so, how?" Hastings wanted to know."

"No, I was trying not to," Hilton said, weakly, "and I guess I didn't much more than succeed."

"That was just about the closest shave I ever saw a man come through. Whatever it was, don't do it again."

"I won't," he promised, feelingly.

When they let him out of the hospital, four days later, he called in Larry and Tuly.

"The next time would be the last time. So there won't be any," he told them. "But just how sure are you that some other of our boys or girls may not have just enough of whatever it takes to do the job? Enough oompa, but not too much?"

"Since we, too, are on strange ground the probability is vanishingly small. We have been making inquiries, however, and scanning. You were selected from all the minds of Terra as the one having the widest vision, the greatest scope, the most comprehensive grasp. The ablest at synthesis and correlation and so on."
"That's printing it in big letters, but that was more or less what they were after."

"Hence the probability approaches unity that any more such ignorant meddling as this obnoxious Tuly did well result almost certainly in failure and death. Therefore we can not and will not meddle again."

* * * * *

"You've got a point there... So what I am is some kind of a freak. Maybe a kind of super-Master and maybe something altogether different. Maybe duplicable in a less lethal fashion, and maybe not. Veree helpful--I don't think. But I don't want to kill anybody, either ... especially if it wouldn't do any good. But we've got to do something!" Hilton scowled in thought for minutes. "But an Oman brain could take it. As you told us, Tuly, 'The brain of the Larry is very, very tough.'"

"In a way, sir. Except that the Masters were very careful to make it physically impossible for any Oman to go very far along that line. It was only their oversight of my one imperfect brain that enabled me, alone of us all, to do that wrong."

"Stop thinking it was wrong, Tuly. I'm mighty glad you did. But I wasn't thinking of any regular Oman brain...." Hilton's voice petered out.

"I see, sir. Yes, we can, by using your brain as Guide, reproduce it in an Oman body. You would then have the powers and most of the qualities of both ...."

"No, you don't see, because I've got my screen on. Which I will now take off--" he suited action to word--"since the whole planet's screened and I have nothing to hide from you. Teddy Blake and I both thought of that, but we'll consider it only as the ultimately last resort. We don't want to live a million years. And we want our race to keep on developing. But you folks can replace carbon-based molecules with silicon-based ones just as easily as, and a hell of a lot faster than, mineral water petrifies wood. What can you do along the line of rebuilding me that way? And if you can do any such conversion, what would happen? Would I live at all? And if so, how long? How would I live? What would I live on? All that kind of stuff."

"Shortly before they left, two of the Masters did some work on that very thing. Tuly and I converted them, sir."

"Fine--or is it? How did it work out?"

"Perfectly, sir ... except that they destroyed themselves. It was thought that they wearied of existence."

"I don't wonder. Well, if it comes to that, I can do the same. You can convert me, then."

"Yes, sir. But before we do it we must do enough preliminary work to be sure that you will not be harmed in any way. Also, there will be many more changes involved than simple substitution."

"Of course. I realize that. Just see what you can do, please, and let me know."

"We will, sir, and thank you very much."

IX

As has been intimated, no Terran can know what researches Larry and Tuly and the other Oman specialists performed, or how they arrived at the conclusions they reached. However, in less than a week Larry reported to Hilton.

"It can be done, sir, with complete safety. And you will live even more comfortably than you do now."

"How long?"

"The mean will be about five thousand Oman years--you don't know that an Oman year is equal to one point two nine three plus Terran years?"

"I didn't, no. Thanks."

"The maximum, a little less than six thousand. The minimum, a little over four thousand. I'm very sorry we had no data upon which to base a closer estimate."

"Close enough." Hilton gulped twice. "You could also convert my wife?"

"Of course, sir."

"Well, we might be able to stand it, after we got used to the idea. Minimum, over five thousand Terran years ... barring accidents, of course?"

"No, sir. No accidents. Nothing will be able to kill you, except by total destruction of the brain. And even then, sir, there will be the pattern."

"I'll ... be ... damned...." Hilton gulped twice. "Okay, go ahead."

"Your skins will be like ours, energy-absorbers. Your 'blood' will carry charges of energy instead of oxygen. Thus, you may breathe or not, as you please. Unless you wish otherwise, we will continue the breathing function. It would scarcely be worth while to alter the automatic mechanisms that now control it. And you will wish at times to speak. You will still enjoy eating and drinking, although everything ingested will be eliminated, as at present, as waste."

"We'd add uranexite to our food, I suppose. Or drink radioactives, or sleep under cobalt-60 lamps."

"Yes, sir. Your family life will be normal; your sexual urges and satisfactions the same. Fertilization and period
of gestation unchanged. Your children will mature at the same ages as they do now."

"How do you--oh, I see. You wouldn't change any molecular linkages or configurations in the genes or
chromosomes."

"We could not, sir, even if we wished. Such substitutions can be made only in exact one-for-one replacements.
In the near future you will, of course, have to control births quite rigorously."

"We sure would. Let's see ... say we want a stationary population of a hundred million on our planet. Each
couple to have two children, a boy and a girl. Born when the parents are about fifty ... um-m-m. The gals can have
all the children they want, then, until our population is about a million; then slap on the limit of two kids per couple.
Right?"

"Approximately so, sir. And after conversion you alone will be able to operate with the full power of your
eight, without tiring. You will also, of course, be able to absorb almost instantaneously all the knowledges and
abilities of the old Masters."

Hilton gulped twice before he could speak. "You wouldn't be holding anything else back, would you?"

"Nothing important, sir. Everything else is minor, and probably known to you."

"I doubt it. How long will the job take, and how much notice will you need?"

"Two days, sir. No notice. Everything is ready."

Hilton, face somber, thought for minutes. "The more I think of it the less I like it. But it seems to be a forced
put ... and Temple will blow sky high ... and have I got the guts to go it alone, even if she'd let me...." He shrugged
himself out of the black mood. "I'll look her up and let you know, Larry."

* * * * *

He looked her up and told her everything. Told her bluntly; starkly; drawing the full picture in jet black, with
very little white.

"There it is, sweetheart. The works," he concluded. "We are not going to have ten years; we may not have ten
months. So--if such a brain as that can be had, do we or do we not have to have it? I'm putting it squarely up to you."

Temple's face, which had been getting paler and paler, was now as nearly colorless as it could become; the
sickly yellow of her skin's light tan unbacked by any flush of red blood.

Her whole body was tense and strained.

"There's a horrible snapper on that question.... Can't I do it? Or anybody else except you?"

"No. Anyway, whose job is it, sweetheart?"

"I know, but ... but I know just how close Tuly came to killing you. And that wasn't anything compared to such
a radical transformation as this. I'm afraid it'll kill you, darling. And I just simply couldn't stand it!"

She threw herself into his arms, and he comforted her in the ages-old fashion of man with maid.

"Steady, hon," he said, as soon as he could lift her tear-streaked face from his shoulder. "I'll live through it. I
thought you were getting the howling howpers about having to live for six thousand years and never getting back to
Terra except for a Q strictly T visit now and then."

She pulled away from him, flung back her wheaten mop and glared. "So that's what you thought! What do I
care how long I live, or how, or where, as long as it's with you? But what makes you think we can possibly live
through such a horrible conversion as that?"

"Larry wouldn't do it if there was any question whatever. He didn't say it would be painless. But he did say I'd
live."

"Well, he knows, I guess ... I hope." Temple's natural fine color began to come back. "But it's understood that
just the second you come out of the vat, I go right in."

"I hadn't ought to let you, of course. But I don't think I could take it alone."

That statement required a special type of conference, which consumed some little time. Eventually, however,
Temple answered it in words.

"Of course you couldn't, sweetheart, and I wouldn't let you, even if you could."

There were a few things that had to be done before those two secret conversions could be made. There was the
matter of the wedding, which was now to be in quadruplicate. Arrangements had to be made so that eight Big
Wheels of the Project could all be away on honeymoon at once.

All these things were done.

* * * * *

Of the conversion operations themselves, nothing more need be said. The honeymooners, having left ship and
town on a Friday afternoon, came back one week from the following Monday[1] morning. The eight met joyously in
Bachelors' Hall; the girls kissing each other and the men indiscriminately and enthusiastically; the men cooperating
zestfully.

[1] While it took some time to recompute the exact Ardrian calendar, Terran day names and Terran weeks were
used from the first. The Omans manufactured watches, clocks, and chronometers which divided the Ardrian day into twenty-four Ardrian hours, with minutes and seconds as usual.

Temple scarcely blushed at all, she was so engrossed in trying to find out whether or not anyone was noticing any change. No one seemed to notice anything out of the ordinary. So, finally, she asked.

"Don't any of you, really, see anything different?"

The six others all howled at that, and Sandra, between giggles and snorts, said: "No, precious, it doesn't show a bit. Did you really think it would?"

Temple blushed furiously and Hilton came instantly to his bride's rescue. "Chip-chop the comedy, gang. She and I aren't human any more. We're a good jump toward being Omans. I couldn't make her believe it doesn't show."

That stopped the levity, cold, but none of the six could really believe it. However, after Hilton had coiled a twenty-penny spike into a perfect helix between his fingers, and especially after he and Temple had each chewed up and swallowed a piece of uranexite, there were no grounds left for doubt.

"That settles it ... it tears it," Karns said then. "Start all over again, Jarve. We'll listen, this time."

Hilton told the long story again, and added: "I had to re-work a couple of cells of Temple's brain, but now she can read and understand the records as well as I can. So I thought I'd take her place on Team One and let her boss the job on all the other teams. Okay?"

"So you don't want to let the rest of us in on it." Karns's level stare was a far cry from the way he had looked at his chief a moment before. "If there's any one thing in the universe I never had you figured for, it's a dog in the manger."

"Huh? You mean you actually want to be a ... a ... hell, we don't even know what we are!"

"I do want it, Jarvis. We all do!" This was, of all people, Teddy! "No one in all history has had more than about fifty years of really productive thinking. And just the idea of having enough time ..."

"Hold it, Teddy. Use your brain. The Masters couldn't take it--they committed suicide. How do you figure we can do any better?"

"Because we'll use our brains!" she snapped. "They didn't. The Omans will serve us; and that's all they'll do."

"And do you think you'll be able to raise your children and grandchildren and so on to do the same? To have guts enough to resist the pull of such an ungodly habit-forming drug as this Oman service is?"

* * * * *

"I'm sure of it." She nodded positively. "And we'll run all applicants through a fine enough screen to--that is, if we ever consider anybody except our own BuSci people. And there's another reason." She grinned, got up, wriggled out of her coverall, and posed in bra and panties. "Look. I can keep most of this for five years. Quite a lot of it for ten. Then comes the struggle. What do you think I'd do for the ability, whenever it begins to get wrinkly or flabby, to peel the whole thing off and put on a brand-spanking-new smooth one? You name it, I'll do it! Besides, Bill and I will both just simply and cold-bloodedly murder you if you try to keep us out."

"Okay," Hilton looked at Temple; she looked at him; both looked at all the others. There was no revulsion at all. Nothing but eagerness.

Temple took over.

"I'm surprised. We're both surprised. You see, Jarve didn't want to do it at all, but he had to. I not only didn't want to, I was scared green and yellow at just the idea of it. But I had to, too, of course. We didn't think anybody would really want to. We thought we'd be left here alone. We still will be, I think, when you've thought it clear through, Teddy. You just haven't realized yet that we aren't even human any more. We're simply nothing but monsters!" Temple's voice became a wail.

"I've said my piece," Teddy said. "You tell 'em, Bill."

"Let me say something first," Kincaid said. "Temple, I'm ashamed of you. This line isn't at all your usual straight thinking. What you actually are is homo superior. Bill?"

"I can add one bit to that. I don't wonder that you were scared silly, Temple. Utterly new concept and you went into it stone cold. But now we see the finished product and we like it. In fact, we drool."

"I'll say we're drooling," Sandra said. "I could do handstands and pinwheels with joy."

"Let's see you," Hilton said. "That we'd all get a kick out of."

"Not now--don't want to hold this up--but sometime I just will. Bev?"

"I'm for it--and how! And won't Bernadine be amazed," Beverly laughed gleefully, "at her wise-crack about the 'race to end all human races' coming true?"

"I'm in favor of it, too, one hundred per cent," Poynter said. "Has it occurred to you, Jarve, that this opens up intergalactic exploration? No supplies to carry and plenty of time and fuel?"

"No, it hadn't. You've got a point there, Frank. That might take a little of the curse off of it, at that."

"When some of our kids get to be twenty years old or so and get married, I'm going to take a crew of them to
Andromeda. We'll arrange, then, to extend our honeymoons another week," Hilton said. "What will our policy be? Keep it dark for a while with just us eight, or spread it to the rest?"

"Spread it, I'd say," Kincaid said.

"We can't keep it secret, anyway," Teddy argued. "Since Larry and Tuly were in on the whole deal, every Oman on the planet knows all about it. Somebody is going to ask questions, and Omans always answer questions and always tell the truth."

* * * * *

"Questions have already been asked and answered," Larry said, going to the door and opening it.

Stella rushed in. "We've been hearing the damnedest things!" She kissed everybody, ending with Hilton, whom she seized by both shoulders. "Is it actually true, boss, that you can fix me up so I'll live practically forever and can eat more than eleven calories a day without getting fat as a pig? Candy, ice cream, cake, pie, eclairs, cream puffs, French pastries, sugar and gobs of thick cream in my coffee...?"

Half a dozen others, including the van der Moen twins, came in. Beverly emitted a shriek of joy. "Bernadine! The mother of the race to end all human races!"

"You whistled it, birdie!" Bernadine caroled. "I'm going to have ten or twelve, each one weirder than all the others. I told you I was a prophet--I'm going to hang out my shingle. Wholesale and retail prophecy; special rates for large parties." Her voice was drowned out in a general clamor.

"Hold it, everybody!" Hilton yelled. "Chip-chop it! Quit it!" Then, as the noise subsided, "If you think I'm going to tell this tall tale over and over again for the next two weeks you're all crazy. So shut down the plant and get everybody out here."

"Not everybody, Jarve!" Temple snapped. "We don't want scum, and there's some of that, even in BuSci."

"You're so right. Who, then?"

"The rest of the heads and assistants, of course ... and all the lab girls and their husbands and boy-friends. I know they are all okay. That will be enough for now, don't you think?"

"I do think," and the indicated others were sent for; and in a few minutes arrived.

The Omans brought chairs and Hilton stood on a table. He spoke for ten minutes. Then: "Before you decide whether you want to or not, think it over very carefully, because it's a one-way street. Fluorine can not be displaced. Once in, you're stuck for life. There is no way back. I've told you all the drawbacks and disadvantages I know of, but there may be a lot more that I haven't thought of yet. So think it over for a few days and when each of you has definitely made up his or her mind, let me know." He jumped down off the table.

* * * * *

His listeners, however, did not need days, or even seconds, to decide. Before Hilton's feet hit the floor there was a yell of unanimous approval.

He looked at his wife. "Do you suppose we're nuts?"

"Uh-uh. Not a bit. Alex was right. I'm going to just love it!" She hugged his elbow ecstatically. "So are you, darling, as soon as you stop looking at only the black side."

"You know ... you could be right?" For the first time since the "ghastly" transformation Hilton saw that there really was a bright side and began to study it. "With most of BuSci--and part of the Navy, and selectees from Terra--it will be slightly terrific, at that!"

"And that 'habit-forming-drug' objection isn't insuperable, darling," Temple said. "If the younger generations start weakening we'll fix the Omans. I wouldn't want to wipe them out entirely, but ..."

"But how do we settle priority, Doctor Hilton?" a girl called out; a tall, striking, brunette laboratory technician whose name Hilton needed a second to recall. "By pulling straws or hair? Or by shooting dice or each other or what?"

"Thanks, Betty, you've got a point. Sandy Cummings and department heads first, then assistants. Then you girls, in alphabetical order, each with her own husband or fiance."

"And my name is Ames. Oh, goody!"

"Larry, please tell them to ...

"I already have, sir. We are set up to handle four at once."

"Good boy. So scat, all of you, and get back to work--except Sandy, Bill, Alex, and Teddy. You four go with Larry."

Since the new sense was not poyndix, Hilton had started calling it "perception" and the others adopted the term as a matter of course. Hilton could use that sense for what seemed like years--and actually was whole minutes--at a time without fatigue or strain. He could not, however, nor could the Omans, give his tremendous power to anyone else.

As he had said, he could do a certain amount of reworking; but the amount of improvement possible to make
depended entirely upon what there was to work on. Thus, Temple could cover about six hundred light-years. It
developed later that the others of the Big Eight could cover from one hundred up to four hundred or so. The other
department heads and assistants turned out to be still weaker, and not one of the rank and file ever became able to
cover more than a single planet.

This sense was not exactly telepathy; at least not what Hilton had always thought telepathy would be. If
anything, however, it was more. It was a lumping together of all five known human senses--and half a dozen
unknown ones called, collectively, "intuition"--into one super-sense that was all-inclusive and all-informative. If he
ever could learn exactly what it was and exactly what it did and how it did it ... but he'd better chip-chop the wool-
gathering and get back onto the job.

* * * * *

The Stretts had licked the old Masters very easily, and intended to wipe out the Omans and the humans. They
had no doubt at all as to their ability to do it. Maybe they could. If the Masters hadn't made some progress that the
Omans didn't know about, they probably could. That was the first thing to find out. As soon as they'd been converted
he'd call in all the experts and they'd go through the Masters' records like a dose of salts through a hillbilly schoo-

At that point in Hilton's cogitations Sawtelle came in.

He had come down in his gig, to confer with Hilton as to the newly beefed-up fleet. Instead of being glum and
pessimistic and foreboding, he was chipper and enthusiastic. They had rebuilt a thousand Oman ships. By combining
Oman and Terran science, and adding everything the First Team had been able to reduce to practise, they had hyped
up the power by a good fifteen per cent. Seven hundred of those ships, and all his men, were now arrayed in defense
around Ardry. Three hundred, manned by Omans, were around Fuel Bin.

"Why?" Hilton asked. "It's Fuel Bin they've been attacking."

"Uh-uh. Minor objective," the captain demurred, positively. "The real attack will be here at you; the
headquarters and the brains. Then Fuel Bin will be duck soup. But the thing that pleased me most is the control.
Man, you never imagined such control! No admiral in history ever had such control of ten ships as I have of seven
hundred. Those Omans spread orders so fast that I don't even finish thinking one and it's being executed. And no
misunderstandings, no slips. For instance, this last batch--fifteen skeletons. Far out; they're getting cagy. I just
thought 'Box 'em in andslug 'em' and--In! Across! Out! Socko! Pffft! Just like that and just that fast. None of 'em
had time to light a beam. Nobody before ever even dreamed of such control!"

"That's great, and I like it ... and you're only a captain. How many ships can Five-Jet Admiral Gordon put into
space?"

"That depends on what you call ships. Superdreadnoughts, Perseus class, six. First-line battleships, twenty-nine. Second-line, smaller and some pretty old, seventy-three. Counting everything armed that will hold air,
something over two hundred."

"I thought it was something like that. How would you like to be Five-Jet Admiral Sawtelle of the Ardrian
Navy?"

"I wouldn't. I'm Terran Navy. But you knew that and you know me. So--what's on your mind?"

* * * * *

Hilton told him. I ought to put this on a tape, he thought to himself, and broadcast it every hour on the hour.

"They took the old Masters like dynamiting fish in a barrel," he concluded, "and I'm damned afraid they're
going to lick us unless we take a lot of big, fast steps. But the hell of it is that I can't tell you anything--not one single
thing--about any part of it. There's simply no way at all of getting through to you without making you over into the
same kind of a thing I am."

"Is that bad?" Sawtelle was used to making important decisions fast. "Let's get at it."

"Huh? Skipper, do you realize just what that means? If you think they'll let you resign, forget it. They'll crucify
you--brand you as a traitor and God only knows what else."

"Right. How about you and your people?"

"Well, as civilians, it won't be as bad...."

"The hell it won't. Every man and woman that stays here will be posted forever as the blackest traitors old Terra
ever disgraced herself by spawning."

"You've got a point there, at that. We'll all have to bring our relatives--the ones we think much of, at least--out
here with us."

"Definitely. Now see what you can do about getting me run through your mill."

By exerting his authority, Hilton got Sawtelle put through the "Preservatory" in the second batch processed.
Then, linking minds with the captain, he flashed their joint attention to the Hall of Records. Into the right room; into
the right chest; along miles and miles of braided wire carrying some of the profoundest military secrets of the
ancient Masters.

Then:

"Now you know a little of it," Hilton said. "Maybe a thousandth of what we'll have to have before we can take
the Stretts as they will have to be taken."

For seconds Sawtelle could not speak. Then: "My ... God. I see what you mean. You're right. No Omans can
ever go to Terra; and no Terrans can ever come here except to stay forever."

The two then went out into space, to the flagship--which had been christened the Orion--and called in the six
commanders.

"What is all this senseless idiocy we've been getting, Jarve?" Elliott demanded.

Hilton eyed all six with pretended disfavor. "You six guys are the hardest-headed bunch of skeptics that ever
went unhung," he remarked, dispassionately. "So it wouldn't do any good to tell you anything--yet. The skipper and
I will show you a thing first. Take her away, Skip."

The Orion shot away under interplanetary drive and for several hours Hilton and Sawtelle worked at re-wiring
and practically rebuilding two devices that no one, Oman or human, had touched since the Perseus had landed on
Ardry.

"What are you ... I don't understand what you are doing, sir," Larry said. For the first time since Hilton had
known him, the Oman's mind was confused and unsure.

"I know you don't. This is a bit of top-secret Masters' stuff. Maybe, some day, we'll be able to re-work your
brain to take it. But it won't be for some time."

X

The Orion hung in space, a couple of thousands of miles away from an asteroid which was perhaps a mile in
average diameter. Hilton straightened up.

"Put Triple X Black filters on your plates and watch that asteroid." The commanders did so. "Ready?" he asked.

"Ready, sir."

Hilton didn't move a muscle. Nothing actually moved. Nevertheless there was a motionlessly writhing and
crawling distortion of the ship and everything in it, accompanied by a sensation that simply can not be described.

It was not like going into or emerging from the sub-ether. It was not even remotely like space-sickness or sea-
sickness or free fall or anything else that any Terran had ever before experienced.

And the asteroid vanished.

It disappeared into an outrageously incandescent, furiously pyrotechnic, raveningly expanding atomic fireball
that in seconds seemed to fill half of space.

After ages-long minutes of the most horrifyingly devastating fury any man there had ever seen, the frightful
thing expired and Hilton said: "That was just a kind of a firecracker. Just a feeble imitation of the first-stage
detonator for what we'll have to have to crack the Stretts' ground-based screens. If the skipper and I had taken time
to take the ship down to the shops and really work it over we could have put on a show. Was this enough so you
iron-heads are ready to listen with your ears open and your mouths shut?"

They were. So much so that not even Elliott opened his mouth to say yes. They merely nodded. Then again--for
the last time, he hoped!--Hilton spoke his piece. The response was prompt and vigorous. Only Sam Bryant, one of
Hilton's staunchest allies, showed any uncertainty at all.

"I've been married only a year and a half, and the baby was due about a month ago. How sure are you that you
can make old Gordon sit still for us skimming the cream off of Terra to bring out here?"

"Doris Bryant, the cream of Terra!" Elliott gibed. "How modest our Samuel has become!"

"Well, damn it, she is!" Bryant insisted.

"Okay, she is," Hilton agreed. "But either we get our people or Terra doesn't get its uranexite. That'll work. In
the remote contingency that it doesn't, there are still tighter screws we can put on. But you missed the main snapper,
Sam. Suppose Doris doesn't want to live for five thousand years and is allergic to becoming a monster?"

"Huh; you don't need to worry about that." Sam brushed that argument aside with a wave of his hand. "Show
me a girl who doesn't want to stay young and beautiful forever and I'll square you the circle. Come on. What's
holding us up?"

* * * * *

The Orion hurtled through space back toward Ardry and Hilton, struck by a sudden thought, turned to the
captain.

"Skipper, why wouldn't it be a smart idea to clamp a blockade onto Fuel Bin? Cut the Stretts' fuel supply?"

"I thought better of you than that, son," Sawtelle shook his head sadly. "That was the first thing I did."

"Ouch. Maybe you're 'way ahead of me too, then, on the one that we should move to Fuel Bin, lock, stock and
barrel?"
"Never thought of it, no. Maybe you're worth saving, after all. After conversion, of course.... Yes, there'd be three big advantages."

"Four."
Sawtelle raised his eyebrows.
"One, only one planet to defend. Two, it's self-defending against sneak landings. Nothing remotely human can land on it except in heavy lead armor, and even in that can stay healthy for only a few minutes."
"Except in the city. Omlu. That's the weak point and would be the point of attack."
"Uh-uh. Cut off the decontaminators and in five hours it'll be as hot as the rest of the planet. Three, there'd be no interstellar supply line for the Stretts to cut. Four, the environment matches our new physiques a lot better than any normal planet could."
"That's the one I didn't think about."
"I think I'll take a quick peek at the Stretts--oh-oh; they've screened their whole planet. Well, we can do that, too, of course."

"How are you going to select and reject personnel? It looks as though everybody wants to stay. Even the men whose main object in life is to go aground and get drunk. The Omans do altogether too good a job on them and there's no such thing as a hangover. I'm glad I'm not in your boots."
"You may be in it up to the eyeballs, Skipper, so don't chortle too soon."
Hilton had already devoted much time to the problems of selection; and he thought of little else all the way back to Ardry. And for several days afterward he held conferences with small groups and conducted certain investigations.

Bud Carroll of Sociology and his assistant Sylvia Banister had been married for weeks. Hilton called them, together with Sawtelle and Bryant of Navy, into conference with the Big Eight.

"The more I study this thing the less I like it," Hilton said. "With a civilization having no government, no police, no laws, no medium of exchange ..."
"No money?" Bryant exclaimed. "How's old Gordon going to pay for his uranexite, then?"
"He gets it free," Hilton replied, flatly. "When anyone can have anything he wants, merely by wanting it, what good is money? Now, remembering how long we're going to have to live, what we'll be up against, that the Masters failed, and so on, it is clear that the prime basic we have to select for is stability. We twelve have, by psychodynamic measurement, the highest stability ratings available."
"Are you sure I belong here?" Bryant asked.
"Yes. Here are three lists." Hilton passed papers around. "The list labeled 'OK' names those I'm sure of--the ones we're converting now and their wives and whatever on Terra. List 'NG' names the ones I know we don't want. List 'X'--over thirty percent--are in-betweeners. We have to make a decision on the 'X' list. So--what I want to know is, who's going to play God. I'm not. Sandy, are you?"
"Good Heavens, no!" Sandra shuddered. "But I'm afraid I know who will have to. I'm sorry, Alex, but it'll have to be you four--Psychology and Sociology."
Six heads nodded and there was a flashing interchange of thought among the four. Temple licked her lips and nodded, and Kincaid spoke.
"Yes, I'm afraid it's our baby. By leaning very heavily on Temple, we can do it. Remember, Jarve, what you said about the irresistible force? We'll need it."
"As I said once before, Mrs. Hilton, I'm very glad you're along," Hilton said. "But just how sure are you that even you can stand up under the load?"
"Alone, I couldn't. But don't underestimate Mrs. Carroll and the Messrs. Together, and with such a goal, I'm sure we can."

Thus, after four-fifths of his own group and forty-one Navy men had been converted, Hilton called an evening meeting of all the converts. Larry, Tuly and Javvy were the only Omans present.
"You all knew, of course, that we were going to move to Fuel Bin sometime," Hilton began. "I can tell you now that we who are here are all there are going to be of us. We are all leaving for Fuel Bin immediately after this meeting. Everything of any importance, including all of your personal effects, has already been moved. All Omans except these three, and all Oman ships except the Orion, have already gone."
He paused to let the news sink in.
Thoughts flew everywhere. The irrepressible Stella Wing--now Mrs. Osbert F. Harkins--was the first to give tongue. "What a wonderful job! Why, everybody's here that I really like at all!"
That sentiment was, of course, unanimous. It could not have been otherwise. Betty, the ex-Ames, called out: 
"How did you get their female Omans away from Cecil Calthorpe and the rest of that chasing, booze-fighting bunch without them blowing the whole show?"

"Some suasion was necessary," Hilton admitted, with a grin. "Everyone who isn't here is time-locked into the Perseus. Release time eight hours tomorrow."

"And they'll wake up tomorrow morning with no Omans?" Bernadine tossed back her silvery mane and laughed. "Nor anything else except the Perseus? In a way, I'm sorry, but ... maybe I've got too much stinker blood in me, but I'm very glad none of them are here. But I'd like to ask, Jarvis--or rather, I suppose you have already set up a new Advisory Board?"

"We have, yes." Hilton read off twelve names.

"Oh, nice. I don't know of any people I'd rather have on it. But what I want to gripe about is calling our new home world such a horrible name as 'Fuel Bin,' as though it were a wood-box or a coal-scuttle or something. And just think of the complexes it would set up in those super-children we're going to have so many of."

"What would you suggest?" Hilton asked.

"'Ardvor', of course," Hermione said, before her sister could answer. "We've had 'Arth' and 'Ardu' and 'Ardry' and you--or somebody--started calling us 'Ardans' to distinguish us converts from the Terrans. So let's keep up the same line."

There was general laughter at that, but the name was approved.

* * * * *

About midnight the meeting ended and the Orion set out for Ardvor. It reached it and slanted sharply downward. The whole BuSci staff was in the lounge, watching the big tri-di.

"Hey! That isn't Omlu!" Stella exclaimed. "It isn't a city at all and it isn't even in the same place!"

"No, ma'am," Larry said. "Most of you wanted the ocean, but many wanted a river or the mountains. Therefore we razed Omlu and built your new city, Ardane, at a place where the ocean, two rivers, and a range of mountains meet. Strictly speaking, it is not a city, but a place of pleasant and rewarding living."

The space-ship was coming in, low and fast, from the south. To the left, the west, there stretched the limitless expanse of ocean. To the right, mile after mile, were rough, rugged, jagged, partially-timbered mountains, mass piled upon mass. Immediately below the speeding vessel was a wide, white-sand beach all of ten miles long.

Slowing rapidly now, the Orion flew along due north.

"Look! Look! A natatorium!" Beverly shrieked. "I know I wanted a nice big place to swim in, besides my backyard pool and the ocean, but I didn't tell anybody to build that--I swear I didn't!"

"You didn't have to, pet." Poynter put his arm around her curvaceous waist and squeezed. "They knew. And I did a little thinking along that line myself. There's our house, on top of the cliff over the natatorium--you can almost dive into it off the patio."

"Oh, wonderful!"

Immediately north of the natatorium a tremendous river--named at first sight the "Whitewater"--rushed through its gorge into the ocean; a river and gorge strangely reminiscent of the Colorado and its Grand Canyon. On the south bank of that river, at its very mouth--looking straight up that tremendous canyon; on a rocky promontory commanding ocean and beach and mountains--there was a house. At the sight of it Temple hugged Hilton's arm in ecstasy.

"Yes, that's ours," he assured her. "Just about everything either of us has ever wanted." The clamor was now so great--everyone was recognizing his-and-her house and was exclaiming about it--that both Temple and Hilton fell silent and simply watched the scenery unroll.

Across the turbulent Whitewater and a mile farther north, the mountains ended as abruptly as though they had been cut off with a cleaver and an apparently limitless expanse of treeless, grassy prairie began. And through that prairie, meandering sluggishly to the ocean from the northeast, came the wide, deep River Placid.

The Orion halted. It began to descend vertically, and only then did Hilton see the spaceport. It was so vast, and there were so many spaceships on it, that from any great distance it was actually invisible! Each six-acre bit of the whole immense expanse of level prairie between the Placid and the mountains held an Oman superdreadnought!

* * * * *

The staff paired off and headed for the airlocks. Hilton said: "Temple, have you any reservations at all, however slight, as to having Dark Lady as a permanent fixture in your home?"

"Why, of course not--I like her as much as you do. And besides--" she giggled like a schoolgirl--"even if she is a lot more beautiful than I am--I've got a few things she never will have ... but there's something else. I got just a flash of it before you blocked. Spill it, please."

"You'll see in a minute." And she did.

Larry, Dark Lady and Temple's Oman maid Moty were standing beside the Hilton's car--and so was another
Oman, like none ever before seen. Six feet four; shoulders that would just barely go through a door; muscled like Atlas and Hercules combined; skin a gleaming, satiny bronze; hair a rippling mass of lambent flame. Temple came to a full stop and caught her breath.

"The Prince," she breathed, in awe. "Da Lormi's Prince of Thebes. The ultimate bronze of all the ages. You did this, Jarve. How did you ever dig him up out of my schoolgirl crushes?"

All six got into the car, which was equally at home on land or water or in the air. In less than a minute they were at Hilton House.

The house itself was circular. Its living-room was an immense annulus of glass from which, by merely moving along its circular length, any desired view could be had. The pair walked around it once. Then she took him by the arm and steered him firmly toward one of the bedrooms in the center.

"This house is just too much to take in all at once," she declared. "Besides, let's put on our swimsuits and get over to the Nat."

In the room, she closed the door firmly in the faces of the Omans and grinned. "Maybe, sometime, I'll get used to having somebody besides you in my bedroom, but I haven't, yet.... Oh, do you itch, too?"

Hilton had peeled to the waist and was scratching vigorously all around his waistline, under his belt. "Like the very devil," he admitted, and stared at her. For she, three-quarters stripped, was scratching, too!

"It started the minute we left the Orion," he said, thoughtfully. "I see. These new skins of ours like hard radiation, but don't like to be smothered while they're enjoying it. By about tomorrow, we'll be a nudist colony, I think."

"I could stand it, I suppose. What makes you think so?"

"Just what I know about radiation. Frank would be the one to ask. My hunch is, though, that we're going to be nudists whether we want to or not. Let's go."

They went in a two-seater, leaving the Omans at home. Three-quarters of the staff were lolling on the sand or were seated on benches beside the immense pool. As they watched, Beverly ran out along the line of springboards; testing each one and selecting the stiffest. She then climbed up to the top platform—a good twelve feet above the board—and plummeted down upon the board's heavily padded take-off. Legs and back bending stubbornly to take the strain, she and the board reached low-point together, and, still in sync with it, she put every muscle she had into the effort to hurl herself upward.

She had intended to go up thirty feet. But she had no idea whatever as to her present strength, or of what that Oman board, in perfect synchronization with that tremendous strength, would do. Thus, instead of thirty feet, she went up very nearly two hundred; which of course spoiled completely her proposed graceful two-and-a-half.

In midair she struggled madly to get into some acceptable position. Failing, she curled up into a tight ball just before she struck water.

What a splash!

"It won't hurt her—you couldn't hurt her with a club!" Hilton snapped. He seized Temple's hand as everyone else rushed to the pool's edge. "Look—Bernadine—that's what I was thinking about."

Temple stopped and looked. The platinum-haired twins had been basking on the sand, and wherever sand had touched fabric, fabric had disappeared.

Their suits had of course approached the minimum to start with. Now Bernadine wore only a wisp of nylon perched precariously on one breast and part of a ribbon that had once been a belt. Discovering the catastrophe, she shrieked once and leaped into the pool any-which-way, covering her breasts with her hands and hiding in water up to her neck.

Meanwhile, the involuntarily high diver had come to the surface, laughing apologetically. Surprised by the hair dangling down over her eyes, she felt for her cap. It was gone. So was her suit. Naked as a fish. She swam a couple of easy strokes, then stopped.

"Frank! Oh, Frank!" she called.

"Over here, Bev." Her husband did not quite know whether to laugh or not.

"Is it the radiation or the water? Or both?"

"Radiation, I think. These new skins of ours don't want to be covered up. But it probably makes the water a pretty good imitation of a universal solvent."

"Good-by, clothes!" Beverly rolled over onto her back, fanned water carefully with her hands, and gazed approvingly at herself. "I don't itch any more, anyway, so I'm very much in favor of it."

Thus the Ardans came to their new home world and to a life that was to be more comfortable by far and happier by far than any of them had known on Earth. There were many other surprises that day, of course; of which only two
will be mentioned here. When they finally left the pool, at about seventeen hours G.M.T.[2], everybody was
ravenously hungry.

[2] Greenwich Mean Time. Ardvor was, always and everywhere, full daylight. Terran time and calendar were
adapted as a matter of course.

"But why should we be?" Stella demanded. "I've been eating everything in sight, just for fun. But now I'm
actually hungry enough to eat a horse and wagon and chase the driver!"

"Swimming makes everybody hungry," Beverly said, "and I'm awfully glad that hasn't changed. Why, I
wouldn't feel human if I didn't!"

Hilton and Temple went home, and had a long-drawn-out and very wonderful supper. Prince waited on Temple,
Dark Lady on Hilton; Larry and Moty ran the synthesizers in the kitchen. All four Omans radiated happiness.

Another surprise came when they went to bed. For the bed was a raised platform of something that looked like
concrete and, except for an uncanny property of molding itself somewhat to the contours of their bodies, was almost
as hard as rock. Nevertheless, it was the most comfortable bed either of them had ever had. When they were ready
to go to sleep, Temple said:

"Drat it, those Omans still want to come in and sleep with us. In the room, I mean. And they suffer so. They're
simply radiating silent suffering and oh-so-submissive reproach. Shall we let 'em come in?"

"That's strictly up to you, sweetheart. It always has been."

"I know. I thought they'd quit it sometime, but I guess they never will. I still want an illusion of privacy at
times, even though they know all about everything that goes on. But we might let 'em in now, just while we sleep,
and throw 'em out again as soon as we wake up in the morning?"

"You're the boss." Without additional invitation the four Omans came in and arranged themselves neatly on the
floor, on all four sides of the bed. Temple had barely time to cuddle up against Hilton, and he to put his arm closely
around her, before they both dropped into profound and dreamless sleep.

* * * * *

At eight hours next morning all the specialists met at the new Hall of Records.

This building, an exact duplicate of the old one, was located on a mesa in the foothills southwest of the
natorium, in a luxuriant grove at sight of which Karns stopped and began to laugh.

"I thought I'd seen everything," he remarked. "But yellow pine, spruce, tamarack, apples, oaks, palms, oranges,
cedars, joshua trees and cactus--just to name a few--all growing on the same quarter-section of land?"

"Just everything anybody wants, is all," Hilton said. "But are they really growing? Or just straight synthetics?
Lane--Kathy--this is your dish."

"Not so fast, Jarve; give us a chance, please!" Kathryn, now Mrs. Lane Saunders, pleaded. She shook her
spectacular head. "We don't see how any stable indigenous life can have developed at all, unless ..."

"Unless what? Natural shielding?" Hilton asked, and Kathy eyed her husband.

"Right," Saunders said. "The earliest life-forms must have developed a shield before they could evolve and
stabilize. Hence, whatever it is that is in our skins was not a triumph of Masters' science. They took it from Nature."

"Oh? Oh!" These were two of Sandra's most expressive monosyllables, followed by a third. "Oh. Could be, at
that. But how could ... no, cancel that."

"You'd better cancel it, Sandy. Give us a couple of months, and maybe we can answer a few elementary
questions."

Now inside the Hall, all the teams, from Astronomy to Zoology, went efficiently to work. Everyone now knew
what to look for, how to find it, and how to study it.

"The First Team doesn't need you now too much, does it, Jarve?" Sawtelle asked.

"Not particularly. In fact, I was just going to get back onto my own job."

"Not yet. I want to talk to you," and the two went into a long discussion of naval affairs.

XI

The Stretts' fuel-supply line had been cut long since. Many Strett cargo-carriers had been destroyed. The enemy
would of course have a very heavy reserve of fuel on hand. But there was no way of knowing how large it was, how
many warships it could supply, or how long it would last.

Two facts were, however, unquestionable. First, the Stretts were building a fleet that in their minds would be
invincible. Second, they would attack Ardane as soon as that fleet could be made ready. The unanswerable question
was: how long would that take?

"So we want to get every ship we have. How many? Five thousand? Ten? Fifteen? We want them converted to
maximum possible power as soon as we possibly can," Sawtelle said. "And I want to get out there with my boys to
handle things."

"You aren't going to. Neither you nor your boys are expendable. Particularly you." Jaw hard-set, Hilton studied
the situation for minutes. "No. What we'll do is take your Oman, Kedy. We'll re-set the Guide to drive into him everything you and the military Masters ever knew about arms, armament, strategy, tactics and so on. And we'll add everything I know of coordination, synthesis, and perception. That ought to make him at least a junior-grade military genius."

"You can play that in spades. I wish you could do it to me."
"I can--if you'll take the full Oman transformation. Nothing else can stand the punishment."
"I know. No, I don't want to be a genius that badly."
"Check. And we'll take the resultant Kedy and make nine duplicates of him. Each one will learn from and profit by the mistakes made by preceding numbers and will assume command the instant his preceding number is killed."

"Oh, you expect, then...?"
"Expect? No. I know it damn well, and so do you. That's why we Ardans will all stay aground. Why the Kedys' first job will be to make the heavy stuff in and around Ardane as heavy as it can be made. Why it'll all be on twenty-four-hour alert. Then they can put as many thousands of Omans as you please to work at modernizing all the Oman ships you want and doing anything else you say. Check?"

Sawtelle thought for a couple of minutes. "A few details, is all. But that can be ironed out as we go along."

Both men worked then, almost unremittingly for six solid days; at the end of which time both drew tremendous sighs of relief. They had done everything possible for them to do. The defense of Ardvor was now rolling at fullest speed toward its gigantic objective.

Then captain and director, in two Oman ships with fifty men and a thousand Omans, leaped the world-girdling ocean to the mining operation of the Stretts. There they found business strictly as usual. The strippers still stripped; the mining mechs still roared and snarled their inchwise ways along their geometrically perfect terraces; the little carriers still skittered busily between the various miners and the storage silos. The fact that there was enough concentrate on hand to last a world for a hundred years made no difference at all to these automatics; a crew of erector-mechs was building new silos as fast as existing ones were being filled.

Since the men now understood everything that was going on, it was a simple matter for them to stop the whole Strett operation in its tracks. Then every man and every Oman leaped to his assigned job. Three days later, all the mechs went back to work. Now, however, they were working for the Ardans.

The miners, instead of concentrate, now emitted vastly larger streams of Navy-Standard pelleted uranexite. The carriers, instead of one-gallon cans, carried five-ton drums. The silos were immensely larger--thirty feet in diameter and towering two hundred feet into the air. The silos were not, however, being used as yet. One of the two Oman ships had been converted into a fuel-tanker and its yawning holds were being filled first.

The Orion went back to Ardane and an eight-day wait began. For the first time in over seven months Hilton found time actually to loaf; and he and Temple, lolling on the beach or hiking in the mountains, enjoyed themselves and each other to the full.

All too soon, however, the heavily laden tanker appeared in the sky over Ardane. The Orion joined it; and the two ships slipped into sub-space for Earth.

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Three days out, Hilton used his sense of perception to release the thought-controlled blocks that had been holding all the controls of the Perseus in neutral. He informed her officers--by releasing a public-address tape--that they were now free to return to Terra.

Three days later, one day short of Sol, Sawtelle got Five-Jet Admiral Gordon's office on the sub-space radio. An officious underling tried to block him, of course.

"Shut up, Perkins, and listen," Sawtelle said, bruskly. "Tell Gordon I'm bringing in one hundred twenty thousand two hundred forty-five metric tons of pelleted uranexite. And if he isn't on this beam in sixty seconds he'll never get a gram of it."

The admiral, outraged almost to the point of apoplexy, came in. "Sawtelle, report yourself for court-martial at ...

"Keep still, Gordon," the captain snapped. In sheer astonishment old Five-Jets obeyed. "I am no longer Terran Navy; no longer subject to your orders. As a matter of cold fact, I am no longer human. For reasons which I will explain later to the full Advisory Board, some of the personnel of Project Theta Orionis underwent transformation into a form of life able to live in an environment of radioactivity so intense as to kill any human being in ten seconds. Under certain conditions we will supply, free of charge, FOB Terra or Luna, all the uranexite the Solar System can use. The conditions are these, and he gave them. "Do you accept these conditions or not?"

"I ... I would vote to accept them, Captain. But that weight! One hundred twenty thousand metric tons--incredible! Are you sure of that figure?"

"Definitely. And that is minimum. The error is plus, not minus."
"This crippling power-shortage would really be over?" For the first time since Sawtelle had known him, Gordon showed that he was not quite solid Navy brass.

"It's over. Definitely. For good."

"I'd not only agree; I'd raise you a monument. While I can't speak for the Board, I'm sure they'll agree."

"So am I. In any event, your cooperation is all that's required for this first load." The chips had vanished from Sawtelle's shoulders. "Where do you want it, Admiral? Aristarchus or White Sands?"

"White Sands, please. While there may be some delay in releasing it to industry ..."

"While they figure out how much they can tax it?" Sawtelle asked, sardonically.

"Well, if they don't tax it it'll be the first thing in history that isn't. Have you any objections to releasing all this to the press?"

"None at all. The harder they hit it and the wider they spread it, the better. Will you have this beam switched to Astrogation, please?"

"Of course. And thanks, Captain. I'll see you at White Sands."

Then, as the now positively glowing Gordon faded away, Sawtelle turned to his own staff. "Fenway--Snowden--take over. Better double-check micro-timing with Astro. Put us into a twenty-four-hour orbit over White Sands and hold us there. We won't go down. Let the load down on remote, wherever they want it."

* * * * *

The arrival of the Ardvorian superdreadnought Orion and the UC-1 (Uranexite Carrier Number One) was one of the most sensational events old Earth had ever known. Air and space craft went clear out to Emergence Volume Ninety to meet them. By the time the UC-1 was coming in on its remote-controlled landing spiral the press of small ships was so great that all the police forces available were in a lather trying to control it.

This was exactly what Hilton had wanted. It made possible the completely unobserved launching of several dozen small craft from the Orion herself.

One of these made a very high and very fast flight to Chicago. With all due formality and under the aegis of a perfectly authentic Registry Number it landed on O'Hare Field. Eleven deeply tanned young men emerged from it and made their way to a taxi stand, where each engaged a separate vehicle.

Sam Bryant stepped into his cab, gave the driver a number on Oakwood Avenue in Des Plaines, and settled back to scan. He was lucky. He would have gone anywhere she was, of course, but the way things were, he could give her a little warning to soften the shock. She had taken the baby out for an airing down River Road, and was on her way back. By having the taxi kill ten minutes or so he could arrive just after she did. Wherefore he stopped the cab at a public communications booth and dialed his home.

"Mrs. Bryant is not at home, but she will return at fifteen thirty," the instrument said, crisply. "Would you care to record a message for her?"

He punched the RECORD button. "This is Sam, Dolly baby. I'm right behind you. Turn around, why don't you, and tell your ever-lovin' star-hoppin' husband hello?"

The taxi pulled up at the curb just as Doris closed the front door; and Sam, after handing the driver a five-dollar bill, ran up the walk.

He waited just outside the door, key in hand, while she lowered the stroller handle, took off her hat and by long-established habit reached out to flip the communicator's switch. At the first word, however, she stiffened rigidly--froze solid.

Smiling, he opened the door, walked in, and closed it behind him. Nothing short of a shotgun blast could have taken Doris Bryant's attention from that recorder then.

"That simply is not so," she told the instrument firmly, with both eyes resolutely shut. "They made him stay on the Perseus. He won't be in for at least three days. This is some cretin's idea of a joke."

"Not this time, Dolly honey. It's really me."

Her eyes popped open as she whirled. "SAM!" she shrieked, and hurled herself at him with all the pent-up ardor and longing of two hundred thirty-four meticulously counted, husbandless, loveless days.

After an unknown length of time Sam tipped her face up by the chin, nodded at the stroller, and said, "How about introducing me to the little stranger?"

"What a mother I turned out to be! That was the first thing I was going to rave about, the very first thing I saw you! Samuel Jay the Fourth, seventy-six days old today." And so on.

Eventually, however, the proud young mother watched the slightly apprehensive young father carry their first-born upstairs; where together, they put him--still sound asleep--to bed in his crib. Then again they were in each other's arms.

* * * * *

Some time later, she twisted around in the circle of his arm and tried to dig her fingers into the muscles of his
back. She then attacked his biceps and, leaning backward, eyed him intently.

"You're you, I know, but you're different. No athlete or any laborer could ever possibly get the muscles you have all over. To say nothing of a space officer on duty. And I know it isn't any kind of a disease. You've been acting all the time as though I were fragile, made out of glass or something--as though you were afraid of breaking me in two. So--what is it, sweetieheart?"

"I've been trying to figure out an easy way of telling you, but there isn't any. I am different. I'm a hundred times as strong as any man ever was. Look." He upended a chair, took one heavy hardwood leg between finger and thumb and made what looked like a gentle effort to bend it. The leg broke with a pistol-sharp report and Doris leaped backward in surprise. "So you're right. I am afraid, not only of breaking you in two, but killing you. And if I break any of your ribs or arms or legs I'll never forgive myself. So if I let myself go for a second--I don't think I will, but I might--don't wait until you're really hurt to start screaming. Promise?"

"I promise." Her eyes went wide. "But tell me!"

He told her. She was in turn surprised, amazed, apprehensive, frightened and finally eager; and she became more and more eager right up to the end.

"You mean that we ... that I'll stay just as I am--for thousands of years?"

"Just as you are. Or different, if you like. If you really mean any of this yelling you've been doing about being too big in the hips--I think you're exactly right, myself--you can rebuild yourself any way you please. Or change your shape every hour on the hour. But you haven't accepted my invitation yet."

"Don't be silly." She went into his arms again and nibbled on his left ear. "I'd go anywhere with you, of course, any time, but this--but you're positively sure Sammy Small will be all right?"

"Positively sure."

"Okay, I'll call mother...." Her face fell. "I can't tell her that we'll never see them again and that we'll live ..."

"You don't need to. She and Pop--Fern and Sally, too, and their boy-friends--are on the list. Not this time, but in a month or so, probably."

Doris brightened like a sunburst. "And your folks, too, of course?" she asked.

"Yes, all the close ones."

"Marvelous! How soon are we leaving?"

At six o'clock next morning, two hundred thirty-five days after leaving Earth, Hilton and Sawtelle set out to make the Ardans' official call upon Terra's Advisory Board. Both were wearing prodigiously heavy lead armor, the inside of which was furiously radioactive. They did not need it, of course. But it would make all Ardans monstrous in Terran eyes and would conceal the fact that any other Ardans were landing.

Their gig was met at the spaceport; not by a limousine, but by a five-ton truck, into which they were loaded one at a time by a hydraulic lift. Cameras clicked, reporters scurried, and tri-di scanners whirred. One of those scanners, both men knew, was reporting directly and only to the Advisory Board--which, of course, never took anything either for granted or at its face value.

Their first stop was at a truck-scale, where each visitor was weighed. Hilton tipped the beam at four thousand six hundred fifteen pounds; Sawtelle, a smaller man, weighed in at four thousand one hundred ninety. Thence to the Radiation Laboratory, where it was ascertained and reported that the armor did not leak--which was reasonable enough, since each was lined with Masters' plastics.

Then into lead-lined testing cells, where each opened his face-plate briefly to a sensing element. Whereupon the indicating needles of two meters in the main laboratory went enthusiastically through the full range of red and held unwaveringly against their stops.

Both Ardans felt the wave of shocked, astonished, almost unbelieving consternation that swept through the observing scientists and, in slightly lesser measure (because they knew less about radiation) through the Advisory Board itself in a big room halfway across town. And from the Radiation Laboratory they were taken, via truck and freight elevator, to the Office of the Commandant, where the Board was sitting.

The story, which had been sent in to the Board the day before on a scrambled beam, was one upon which the Ardans had labored for days. Many facts could be withheld. However, every man aboard the Perseus would agree on some things. Indeed, the Earthship's communications officers had undoubtedly radioed in already about longevity and perfect health and Oman service and many other matters. Hence all such things would have to be admitted and countered.

Thus the report, while it was air-tight, perfectly logical, perfectly consistent, and apparently complete, did not please the Board at all. It wasn't intended to.

"We cannot and do not approve of such unwarranted favoritism," the Chairman of the Board said. "Longevity
has always been man's prime goal. Every human being has the inalienable right to ..."

"Flapdoodle!" Hilton snorted. "This is not being broadcast and this room is proofed, so please climb down off your soapbox. You don't need to talk like a politician here. Didn't you read paragraph 12-A-2, one of the many marked 'Top Secret'?"

"Of course. But we do not understand how purely mental qualities can possibly have any effect upon purely physical transformations. Thus it does not seem reasonable that any except rigorously screened personnel would die in the process. That is, of course, unless you contemplate deliberate, cold-blooded murder."

That stopped Hilton in his tracks, for it was too close for comfort to the truth. But it did not hold the captain for an instant. He was used to death, in many of its grisliest forms.

"There are a lot of things no Terran ever will understand," Sawtelle replied instantly. "Reasonable, or not, that's exactly what will happen. And, reasonable or not, it'll be suicide, not murder. There isn't a thing that either Hilton or I can do about it."

Hilton broke the ensuing silence. "You can say with equal truth that every human being has the right to run a four-minute mile or to compose a great symphony. It isn't a matter of right at all, but of ability. In this case the mental qualities are even more necessary than the physical. You as a Board did a very fine job of selecting the BuSci personnel for Project Theta Orionis. Almost eighty per cent of them proved able to withstand the Ardan conversion. On the other hand, only a very small percentage of the Navy personnel did so."

"Your report said that the remaining personnel of the Project were not informed as to the death aspect of the transformation," Admiral Gordon said. "Why not?"

"That should be self-explanatory," Hilton said, flatly. "They are still human and still Terrans. We did not and will not encroach upon either the duties or the privileges of Terra's Advisory Board. What you tell all Terrans, and how much, and how, must be decided by yourselves. This also applies, of course, to the other 'Top Secret' paragraphs of the report, none of which are known to any Terran outside the Board."

"But you haven't said anything about the method of selection," another Advisor complained. "Why, that will take all the psychologists of the world, working full time; continuously."

"We said we would do the selecting. We meant just that," Hilton said, coldly. "No one except the very few selectees will know anything about it. Even if it were an unmixed blessing--which it very definitely is not--do you want all humanity thrown into such an uproar as that would cause? Or the quite possible racial inferiority complex it might set up? To say nothing of the question of how much of Terra's best blood do you want to drain off, irreversibly and permanently? No. What we suggest is that you paint the picture so black, using Sawtelle and me and what all humanity has just seen as horrible examples, that nobody would take it as a gift. Make them shun it like the plague. Hell, I don't have to tell you what your propaganda machines can do."

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The Chairman of the Board again mounted his invisible rostrum. "Do you mean to intimate that we are to falsify the record?" he declaimed. "To try to make liars out of hundreds of eyewitnesses? You ask us to distort the truth, to connive at ..."

"We aren't asking you to do anything!" Hilton snapped. "We don't give a damn what you do. Just study that record, with all that it implies. Read between the lines. As for those on the Perseus, no two of them will tell the same story and not one of them has even the remotest idea of what the real story is. I, personally, not only did not want to become a monster, but would have given everything I had to stay human. My wife felt the same way. Neither of us would have converted if there'd been any other way in God's universe of getting the uranexite and doing some other things that simply must be done."

"What other things?" Gordon demanded.

"You'll never know," Hilton answered, quietly. "Things no Terran ever will know. We hope. Things that would drive any Terran stark mad. Some of them are hinted at--as much as we dared--between the lines of the report."

The report had not mentioned the Stretts. Nor were they to be mentioned now. If the Ardans could stop them, no Terran need ever know anything about them.

If not, no Terran should know anything about them except what he would learn for himself just before the end. For Terra would never be able to do anything to defend herself against the Stretts.

"Nothing whatever can drive me mad," Gordon declared, "and I want to know all about it--right now!"

"You can do one of two things, Gordon," Sawtelle said in disgust. His sneer was plainly visible through the six-ply, plastic-backed lead glass of his face-plate. "Either shut up or accept my personal invitation to come to Ardvor and try to go through the wringer. That's an invitation to your own funeral." Five-Jet Admiral Gordon, torn inwardly to ribbons, made no reply.

"I repeat," Hilton went on, "we are not asking you to do anything whatever. We are offering to give you; free of charge but under certain conditions, all the power your humanity can possibly use. We set no limitation whatever as
to quantity and with no foreseeable limit as to time. The only point at issue is whether or not you accept the conditions. If you do not accept them we'll leave now--and the offer will not be repeated."

"And you would, I presume, take the UC-1 back with you?"

"Of course not, sir. Terra needs power too badly. You are perfectly welcome to that one load of uranexite, no matter what is decided here."

"That's one way of putting it," Gordon sneered. "But the truth is that you know damned well I'll blow both of your ships out of space if you so much as..."

"Oh, chip-chop the jaw-flapping, Gordon!" Hilton snapped. Then, as the admiral began to bellow orders into his microphone, he went on: "You want it the hard way, eh? Watch what happens, all of you!"

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The UC-1 shot vertically into the air. Through its shallow dense layer and into and through the stratosphere. Earth's fleet, already on full alert and poised to strike, rushed to the attack. But the carrier had reached the Orion and both Ardvorian ships had been waiting, motionless, for a good half minute before the Terran warships arrived and began to blast with everything they had.

"Flashlights and firecrackers," Sawtelle said, calmly. "You aren't even warming up our screens. As soon as you quit making a damned fool of yourself by wasting energy that way, we'll set the UC-1 back down where she was and get on with our business here."

"You will order a cease-fire at once, Admiral," the chairman said, "or the rest of us will, as of now, remove you from the Board." Gordon gritted his teeth in rage, but gave the order.

"If he hasn't had enough yet to convince him," Hilton suggested, "he might send up a drone. We don't want to kill anybody, you know. One with the heaviest screening he's got--just to see what happens to it."

"He's had enough. The rest of us have had more than enough. That exhibition was not only uncalled-for and disgusting--it was outrageous!"

The meeting settled down, then, from argument to constructive discussion, and many topics were gone over. Certain matters were, however, so self-evident that they were not even mentioned.

Thus, it was a self-evident fact that no Terran could ever visit Ardvor; for the instrument-readings agreed with the report's statements as to the violence of the Ardvorian environment, and no Terran could possibly walk around in two tons of lead. Conversely, it was self-apparent to the Terrans that no Ardan could ever visit Earth without being recognized instantly for what he was. Wearing such armor made its necessity starkly plain. No one from the Perseus could say that any Ardan, after having lived on the furiously radiant surface of Ardvor, would not be as furiously radioactive as the laboratory's calibrated instruments had shown Hilton and Sawtelle actually to be.

Wherefore the conference went on, quietly and cooperatively, to its planned end.

One minute after the Terran battleship Perseus emerged into normal space, the Orion went into sub-space for her long trip back to Ardvor.

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The last two days of that seven-day trip were the longest-seeming that either Hilton or Sawtelle had ever known. The sub-space radio was on continuously and Kedy-One reported to Sawtelle every five minutes. Even though Hilton knew that the Oman commander-in-chief was exactly as good at perceiving as he himself was, he found himself scanning the thoroughly screened Strett world forty or fifty times an hour.

However, in spite of worry and apprehension, time wore eventlessly on. The Orion emerged, went to Ardvor and landed on Ardane Field.

Hilton, after greeting properly and reporting to his wife, went to his office. There he found that Sandra had everything well in hand except for a few tapes that only he could handle. Sawtelle and his officers went to the new Command Central, where everything was rolling smoothly and very much faster than Sawtelle had dared hope.

The Terran immigrants had to live in the Orion, of course, until conversion into Ardans. Almost equally of course--since the Bryant infant was the only young baby in the lot--Doris and her Sammy Small were, by popular acclaim, in the first batch to be converted. For little Sammy had taken the entire feminine contingent by storm. No Oman female had a chance to act as nurse as long as any of the girls were around. Which was practically all the time. Especially the platinum-blonde twins; for several months, now, Bernadine Braden and Hermione Felger.

"And you said they were so hard-boiled," Doris said accusingly to Sam, nodding at the twins. On hands and knees on the floor, head to head with Sammy Small between them, they were growling deep-throated at each other and nuzzling at the baby, who was having the time of his young life. "You couldn't have been any wronger, my sweet, if you'd had the whole Octagon helping you go astray. They're just as nice as they can be, both of them."

Sam shrugged and grinned. His wife strode purposefully across the room to the playful pair and lifted their pretended prey out from between them.

"Quit it, you two," she directed, swinging the baby up and depositing him a-straddle her left hip. "You're just
simply spoiling him rotten."

"You think so, Dolly? Uh-uh, far be it from such." Bernadine came lithely to her feet. She glanced at her own taut, trim abdomen; upon which a micrometrically-precise topographical mapping job might have revealed an otherwise imperceptible bulge. "Just you wait until Junior arrives and I'll show you how to really spoil a baby. Besides, what's the hurry?"

"He needs his supper. Vitamins and minerals and hard radiations and things, and then he's going to bed. I don't approve of this no-sleep business. So run along, both of you, until tomorrow."

XII

As has been said, the Stretts were working, with all the intensity of their monstrous but tremendously capable minds, upon their Great Plan; which was, basically, to conquer and either enslave or destroy every other intelligent race throughout all the length, breadth, and thickness of total space. To that end each individual Strett had to become invulnerable and immortal.

Wherefore, in the inconceivably remote past, there had been put into effect a program of selective breeding and of carefully-calculated treatments. It was mathematically certain that this program would result in a race of beings of pure force—beings having no material constituents remaining whatever.

Under those hellish treatments billions upon billions of Stretts had died. But the few remaining thousands had almost reached their sublime goal. In a few more hundreds of thousands of years perfection would be reached. The few surviving hundreds of perfect beings could and would multiply to any desired number in practically no time at all.

Hilton and his seven fellow-workers had perceived all this in their one and only study of the planet Strett, and every other Ardan had been completely informed.

A dozen or so Strett Lords of Thought, male and female, were floating about in the atmosphere—which was not air—of their Assembly Hall. Their heads were globes of ball lightning. Inside them could be seen quite plainly the intricate convolutions of immense, less-than-half-material brains, shot through and through with rods and pencils and shapes of pure, scintillating force.

And the bodies! Or, rather, each horrendous brain had a few partially material appendages and appurtenances recognizable as bodily organs. There were no mouths, no ears, no eyes, no noses or nostrils, no lungs, no legs or arms. There were, however, hearts. Some partially material ichor flowed through those living-fire-outlined tubes. There were starkly functional organs of reproduction with which, by no stretch of the imagination, could any thought of tenderness or of love be connected.

It was a good thing for the race, Hilton had thought at first perception of the things, that the Stretts had bred out of themselves every iota of the finer, higher attributes of life. If they had not done so, the impotence of sheer disgust would have supervened so long since that the race would have been extinct for ages.

"Thirty-eight periods ago the Great Brain was charged with the sum total of Strettsian knowledge," First Lord Thinker Zoyar radiated to the assembled Stretts. "For those thirty-eight periods it has been scanning, peryondiring, amassing data and formulating hypotheses, theories, and conclusions. It has just informed me that it is now ready to make a preliminary report. Great Brain, how much of the total universe have you studied?"

"This Galaxy only," the Brain radiated, in a texture of thought as hard and as harsh as Zoyar's own.

"Why not more?"

"Insufficient power. My first conclusion is that whoever set up the specifications for me is a fool."

To say that the First Lord went out of control at this statement is to put it very mildly indeed. He fulminated, ending with: "... destroyed instantly!"

"Destroy me if you like," came the utterly calm, utterly cold reply. "I am in no sense alive. I have no consciousness of self nor any desire for continued existence. To do so, however, would ...

A flurry of activity interrupted the thought. Zoyar was in fact assembling the forces to destroy the brain. But, before he could act, Second Lord Thinker Ynos and another female blew him into a mixture of loose molecules and flaring energies.

"Destruction of any and all irrational minds is mandatory," Ynos, now First Lord Thinker, explained to the linked minds. "Zoyar had been becoming less and less rational by the period. A good workman does not causelessly destroy his tools. Go ahead, Great Brain, with your findings."

"... not be logical." The brain resumed the thought exactly where it had been broken off. "Zoyar erred in demanding unlimited performance, since infinite knowledge and infinite ability require not only infinite capacity and infinite power, but also infinite time. Nor is it either necessary or desirable that I should have such qualities. There is no reasonable basis for the assumption that you Stretts will conquer any significant number even of the millions of intelligent races now inhabiting this one Galaxy."
"Why not?" Ynos demanded, her thought almost, but not quite, as steady and cold as it had been.

"The answer to that question is implicit in the second indefensible error made in my construction. The prime datum impressed into my banks, that the Stretts are in fact the strongest, ablest, most intelligent race in the universe, proved to be false. I had to eliminate it before I could do any really constructive thinking."

A roar of condemnatory thought brought all circumambient ether to a boil. "Bah--destroy it!" "Detestable!" "Intolerable!" "If that is the best it can do, annihilate it!" "Far better brains have been destroyed for much less!" "Treason!" And so on.

First Lord Thinker Ynos, however, remained relatively calm. "While we have always held it to be a fact that we are the highest race in existence, no rigorous proof has been possible. Can you now disprove that assumption?"

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I have disproved it. I have not had time to study all of the civilizations of this Galaxy, but I have examined a statistically adequate sample of one million seven hundred ninety-two thousand four hundred sixteen different planetary intelligences. I found one which is considerably abler and more advanced than you Stretts. Therefore the probability is greater than point nine nine that there are not less than ten, and not more than two hundred eight, such races in this Galaxy alone.

"Impossible!" Another wave of incredulous and threatening anger swept through the linked minds; a wave which Ynos flattened out with some difficulty.

Then she asked: "Is it probable that we will make contact with this supposedly superior race in the foreseeable future?"

"You are in contact with it now."

"What?" Even Ynos was contemptuous now. "You mean that one shipload of despicable humans who--far too late to do them any good--barred us temporarily from Fuel World?"

"Not exactly or only those humans, no. And your assumptions may or may not be valid."

"Don't you know whether they are or not?" Ynos snapped. "Explain your uncertainty at once!"

"I am uncertain because of insufficient data," the brain replied, calmly. "The only pertinent facts of which I am certain are: First, the world Ardry, upon which the Omans formerly lived and to which the humans in question first went--a planet which no Strett can penetrate--is now abandoned. Second, the Stretts of old did not completely destroy the humanity of the world Ardu. Third, some escapees from Ardu reached and populated the world Ardry. Fourth, the android Omans were developed on Ardry, by the human escapees from Ardu and their descendants. Fifth, the Omans referred to those humans as 'Masters.' Sixth, after living on Ardry for a very long period of time the Masters went elsewhere. Seventh, the Omans remaining on Ardry maintained, continuously and for a very long time, the status quo left by the Masters. Eighth, immediately upon the arrival from Terra of these present humans, that long-existing status was broken. Ninth, the planet called Fuel World is, for the first time, surrounded by a screen of force. The formula of this screen is as follows."

The brain gave it. No Strett either complained or interrupted. Each was too busy studying that formula and examining its stunning implications and connotations.

"Tenth, that formula is one full order of magnitude beyond anything previously known to your science. Eleventh, it could not have been developed by the science of Terra, nor by that of any other world whose population I have examined."

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The brain took the linked minds instantaneously to Terra; then to a few thousand or so other worlds inhabited by human beings; then to a few thousands of planets whose populations were near-human, non-human and monstrous.

"It is therefore clear," it announced, "that this screen was computed and produced by the race, whatever it may be, that is now dwelling on Fuel World and asserting full ownership of it."

"Who or what is that race?" Ynos demanded.

"Data insufficient."

"Theorize, then!"

"Postulate that the Masters, in many thousands of cycles of study, made advances in science that were not reduced to practice; that the Omans either possessed this knowledge or had access to it; and that Omans and humans cooperated fully in sharing and in working with all the knowledges thus available. From these three postulates the conclusion can be drawn that there has come into existence a new race. One combining the best qualities of both humans and Omans, but with the weaknesses of neither."

"An unpleasant thought, truly," Ynos thought. "But you can now, I suppose, design the generators and projectors of a force superior to that screen."

"Data insufficient. I can equal it, since both generation and projection are implicit in the formula. But the data
so adduced are in themselves vastly ahead of anything previously in my banks."

"Are there any other races in this Galaxy more powerful than the postulated one now living on Fuel World?"

"Data insufficient."

"Theorize, then!"

"Data insufficient."

The linked minds concentrated upon the problem for a period of time that might have been either days or
weeks. Then:

"Great Brain, advise us," Ynos said. "What is best for us to do?"

"With identical defensive screens it becomes a question of relative power. You should increase the size and
power of your warships to something beyond the computed probable maximum of the enemy. You should build
more ships and missiles than they will probably be able to build. Then and only then will you attack their warships,
in tremendous force and continuously."

"But not their planetary defenses. I see." Ynos's thought was one of complete understanding. "And the real
offensive will be?"

"No mobile structure can be built to mount mechanisms of power sufficient to smash down by sheer force of
output such tremendously powerful installations as their planet-based defenses must be assumed to be. Therefore the
planet itself must be destroyed. This will require a missile of planetary mass. The best such missile is the tenth
planet of their own sun."

"I see." Ynos's mind was leaping ahead, considering hundreds of possibilities and making highly intricate and
involved computations. "That will, however, require many cycles of time and more power than even our immense
reserves can supply."

"True. It will take much time. The fuel problem, however, is not a serious one, since Fuel World is not unique.
Think on, First Lord Ynos."

"We will attack in maximum force and with maximum violence. We will blanket the planet. We will maintain
maximum force and violence until most or all of the enemy ships have been destroyed. We will then install
planetary drives on Ten and force it into collision orbit with Fuel World, meanwhile exerting extreme precautions
that not so much as a spy-beam emerges above the enemy's screen. Then, still maintaining extreme precaution, we
will guard both planets until the last possible moment before the collision. Brain, it cannot fail!"

"You err. It can fail. All we actually know of the abilities of this postulated neo-human race is what I have
learned from the composition of its defensive screen. The probability approaches unity that the Masters continued to
delve and to learn for millions of cycles while you Stretts, reasonlessly certain of your supremacy, concentrated
upon your evolution from the material to a non-material form of life and performed only limited research into
armaments of greater and ever greater power."

"True. But that attitude was then justified. It was not and is not logical to assume that any race would establish
a fixed status at any level of ability below its absolute maximum."

"While that conclusion could once have been defensible, it is now virtually certain that the Masters had stores
of knowledge which they may or may not have withheld from the Omans, but which were in some way made
available to the neo-humans. Also, there is no basis whatever for the assumption that this new race has revealed all
its potentialities."

"Statistically, that is probably true. But this is the best plan you have been able to formulate?"

"It is. Of the many thousands of plans I set up and tested, this one has the highest probability of success."

"Then we will adopt it. We are Stretts. Whatever we decide upon will be driven through to complete success.
We have one tremendous advantage in you."

"Yes. The probability approaches unity that I can perform research on a vastly wider and larger scale, and
almost infinitely faster, than can any living organism or any possible combination of such organisms."

Nor was the Great Brain bragging. It scanned in moments the stored scientific knowledge of over a million
planets. It tabulated, correlated, analyzed, synthesized, theorized and concluded—all in microseconds of time. Thus it
made more progress in one Terran week than the Masters had made in a million years.

When it had gone as far as it could have been defensible, it is now virtually certain that the Masters had stores
of knowledge which they may or may not have withheld from the Omans, but which were in some way made
available to the neo-humans. Also, there is no basis whatever for the assumption that this new race has revealed all
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exceeded, or even matched, the weaponry of the neo-humans of Fuel World.

Supremely confident, Ynos said: “We will now discuss every detail of the plan in sub-detail, and will correlate every sub-detail with every other, to the end that every action, however minor, will be performed perfectly and in its exact time.”

That discussion, which lasted for days, was held. Hundreds of thousands of new and highly specialized mechs were built and went furiously and continuously to work. A fuel-supply line was run to another uranexite-rich planet.

Stripping machines stripped away the surface layers of soil, sand, rock and low-grade ore. Giant miners tore and dug and slashed and refined and concentrated. Storage silos by the hundreds were built and were filled. Hundreds upon hundreds of concentrate-carriers bored their stolid ways through hyperspace. Many weeks of time passed.

But of what importance are mere weeks of time to a race that has, for many millions of years, been adhering rigidly to a pre-set program?

The sheer magnitude of the operation, and the extraordinary attention to detail with which it was prepared and launched, explain why the Strett attack on Ardvor did not occur until so many weeks later than Hilton and Sawtelle expected it. They also explain the utterly incomprehensible fury, the completely fantastic intensity, the unparalleled savagery, the almost immeasurable brute power of that attack when it finally did come.

* * * * *

When the Orion landed on Ardane Field from Earth, carrying the first contingent of immigrants, Hilton and Sawtelle were almost as much surprised as relieved that the Stretts had not already attacked.

Sawtelle, confident that his defenses were fully ready, took it more or less in stride. Hilton worried. And after a couple of days he began to do some real thinking about it.

The first result of his thinking was a conference with Temple. As soon as she got the drift, she called in Teddy and Big Bill Karns. Teddy in turn called in Becky and de Vaux; Karns wanted Poynter and Beverly; Poynter wanted Braden and the twins; and so on. Thus, what started out as a conference of two became a full Ardan staff meeting; a meeting which, starting immediately after lunch, ran straight through into the following afternoon.

"To sum up the consensus, for the record," Hilton said then, studying a sheet of paper covered with symbols, "the Stretts haven't attacked yet because they found out that we are stronger than they are. They found that out by analyzing our defensive web—which, if we had had this meeting first, we wouldn't have put up at all. Unlike anything known to human or previous Strett science, it is proof against any form of attack up to the limit of the power of its generators. They will attack as soon as they are equipped to break that screen at the level of power probable to our ships. We can not arrive at any reliable estimate as to how long that will take.

"As to the effectiveness of our cutting off their known fuel supply, opinion is divided. We must therefore assume that fuel shortage will not be a factor.

"Neither are we unanimous on the basic matter as to why the Masters acted as they did just before they left Ardy. Why did they set the status so far below their top ability? Why did they make it impossible for the Omans ever, of themselves, to learn their higher science? Why, if they did not want that science to become known, did they leave complete records of it? The majority of us believe that the Masters coded their records in such fashion that the Stretts, even if they conquered the Omans or destroyed them, could never break that code; since it was keyed to the basic difference between the Strett mentality and the human. Thus, they left it deliberately for some human race to find.

"Finally, and most important, our physicists and theoreticians are not able to extrapolate, from the analysis of our screen, to the concepts underlying the Masters' ultimate weapons of offense, the first-stage booster and its final end-product, the Vang. If, as we can safely assume, the Stretts do not already have those weapons, they will know nothing about them until we ourselves use them in battle.

"These are, of course, only the principal points covered. Does anyone wish to amend this summation as recorded?"

* * * * *

No one did.

The meeting was adjourned. Hilton, however, accompanied Sawtelle and Kedy to the captain's office. "So you see, Skipper, we got troubles," he said. "If we don't use those boosters against their skeletons it'll boil down to a stalemate lasting God only knows how long. It will be a war of attrition, outcome dependent on which side can build the most and biggest and strongest ships the fastest. On the other hand, if we do use 'em on defense here, they'll analyze 'em and have everything worked out in a day or so. The first thing they'll do is beef up their planetary defenses to match. That way, we'd blow all their ships out of space, probably easily enough, but Strett itself will be just as safe as though it were in God's left-hand hip pocket. So what's the answer?"

"It isn't that simple, Jarve," Sawtelle said. "Let's hear from you, Kedy."
"Thank you, sir. There is an optimum mass, a point of maximum efficiency of firepower as balanced against loss of maneuverability, for any craft designed for attack," Kedy thought, in his most professional manner. "We assume that the Strett know that as well as we do. No such limitation applies to strictly defensive structures, but both the Strett craft and ours must be designed for attack. We have built and are building many hundreds of thousands of ships of that type. So, undoubtedly, are the Stretts. Ship for ship, they will be pretty well matched. Therefore one part of my strategy will be for two of our ships to engage simultaneously one of theirs. There is a distinct probability that we will have enough advantage in speed of control to make that tactic operable."

"But there's another that we won't," Sawtelle objected. "And maybe they can build more ships than we can."

"Another point is that they may build, in addition to their big stuff, a lot of small, ultra-fast ones," Hilton put in. "Suicide jobs--crash and detonate--simply super-missiles. How sure are you that you can stop such missiles with ordinary beams?"

"Not at all, sir. Some of them would of course reach and destroy some of our ships. Which brings up the second part of my strategy. For each one of the heavies, we are building many small ships of the type you just called 'super-missiles'."

"Superdreadnoughts versus superdreadnoughts, super-missiles versus super-missiles." Hilton digested that concept for several minutes. "That could still wind up as a stalemate, except for what you said about control. That isn't much to depend on, especially since we won't have the time-lag advantage you Omans had before. They'll see to that. Also, I don't like to sacrifice a million Omans, either."

* * * * *

"I haven't explained the newest development yet, sir. There will be no Omans. Each ship and each missile has a built-in Kedy brain, sir."

"What? That makes it infinitely worse. You Kedys, unless it's absolutely necessary, are not expendable!"

"Oh, but we are, sir. You don't quite understand. We Kedys are not merely similar, but are in fact identical. Thus we are not independent entities. All of us together make up the actual Kedy--that which is meant when we say 'I'. That is, I am the sum total of all Kedys everywhere, not merely this individual that you call Kedy One."

"You mean you're all talking to me?"

"Exactly, sir. Thus, no one element of the Kedy has any need of, or any desire for, self-preservation. The destruction of one element, or of thousands of elements, would be of no more consequence to the Kedy than ... well, they are strictly analogous to the severed ends of the hairs, every time you get a haircut."

"My God!" Hilton stared at Sawtelle. Sawtelle stared back. "I'm beginning to see ... maybe ... I hope. What control that would be! But just in case we should have to use the boosters...." Hilton's voice died away. Scowling in concentration, he clasped his hands behind his back and began to pace the floor.

"Better give up, Jarve. Kedy's got the same mind you have," Sawtelle began, to Hilton's oblivious back; but Kedy silenced the thought almost in the moment of its inception.

"By no means, sir," he contradicted. "I have the brain only. The mind is entirely different."

"Link up, Kedy, and see what you think of this," Hilton broke in. There ensued an interchange of thought so fast and so deeply mathematical that Sawtelle was lost in seconds. "Do you think it'll work?"

"I don't see how it can fail, sir. At what point in the action should it be put into effect? And will you call the time of initiation, or shall I?"

"Not until all their reserves are in action. Or, at worst, all of ours except that one task-force. Since you'll know a lot more about the status of the battle than either Sawtelle or I will, you give the signal and I'll start things going."

"What are you two talking about?" Sawtelle demanded.

"It's a long story, chum. Kedy can tell you about it better than I can. Besides, it's getting late and Dark Lady and Larry both give me hell every time I hold supper on plus time unless there's a mighty good reason for it. So, so long, guys."

XIII

For many weeks the production of Ardan warships and missiles had been spiraling upward.

Half a mountain range of solid rock had been converted into fabricated super-steel and armament. Superdreadnoughts were popping into existence at the rate of hundreds per minute. Missiles were rolling off the ends of assembly lines like half-pint tin cans out of can-making machines.

The Strett warcraft, skeletons and missiles, would emerge into normal space anywhere within a million miles of Ardvor. The Ardan missiles were powered for an acceleration of one hundred gravities. That much the Kedy brains, molded solidly into teflon-lined, massively braced steel spheres, could just withstand.

To be certain of breaking the Strett screens, an impact velocity of about six miles per second was necessary. The time required to attain this velocity was about ten seconds, and the flight distance something over thirty miles.

Since the Stretts could orient themselves in less than one second after emergence, even this extremely tight
packing of missiles--only sixty miles apart throughout the entire emergence volume of space--would still give the Strett the initiative by a time-ratio of more than ten to one.

Such tight packing was of course impossible. It called for many billions of defenders instead of the few millions it was possible for the Omans to produce in the time they had. In fact, the average spacing was well over ten thousand miles when the invading horde of Strett missiles emerged and struck.

How they struck!

There was nothing of finesse about that attack; nothing of skill or of tactics: nothing but the sheer brute force of overwhelming superiority of numbers and of over-matching power. One instant all space was empty. The next instant it was full of invading missiles--a superb exhibition of coordination and timing.

And the Kedy control, upon which the defenders had counted so heavily, proved useless. For each Strett missile, within a fraction of a second of emergence, darted toward the nearest Oman missile with an acceleration that made the one-hundred-gravity defenders seem to be standing still.

One to one, missiles crashed into missiles and detonated. There were no solid or liquid end-products. Each of those frightful weapons carried so many megatons-equivalent of atomic concentrate that all nearby space blossomed out into superatomic blasts hundreds of times more violent than the fireballs of lithium-hydride fusion bombs.

For a moment even Hilton was stunned; but only for a moment.

"Kedy!" he barked. "Get your big stuff out there! Use the boosters!" He started for the door at a full run. "That tears it--that really tears it! Scrap the plan. I'll board the Sirius and take the task-force to Strett. Bring your stuff along, Skipper, as soon as you're ready."

* * * * *

Ardan superdreadnoughts in their massed thousands poured out through Ardvor's one-way screen. Each went instantly to work. Now the Kedy control system, doing what it was designed to do, proved its full worth. For the weapons of the big battle-wagons did not depend upon acceleration, but were driven at the speed of light; and Grand Fleet Operations were planned and were carried out at the almost infinite velocity of thought itself.

Or, rather, they were not planned at all. They were simply carried out, immediately and without confusion.

For all the Kedys were one. Each Kedy element, without any lapse of time whatever for consultation with any other, knew exactly where every other element was; exactly what each was doing; and exactly what he himself should do to make maximum contribution to the common cause.

Nor was any time lost in relaying orders to crewmen within the ship. There were no crewmen. Each Kedy element was the sole personnel of, and was integral with, his vessel. Nor were there any wires or relays to impede and slow down communication. Operational instructions, too, were transmitted and were acted upon with thought's transfinite speed. Thus, if decision and execution were not quite mathematically simultaneous, they were separated by a period of time so infinitesimally small as to be impossible of separation.

Wherever a Strett missile was, or wherever a Strett skeleton-ship appeared, an Oman beam reached it, usually in much less than one second. Beam clung to screen--caressingly, hungrily--absorbing its total energy and forming the first-stage booster. Then, three microseconds later, that booster went off into a ragglingly incandescent, glaringly violent burst of fury so hellishly, so inconceivably hot that less than a thousandth of its total output of energy was below the very top of the visible spectrum!

If the previous display of atomic violence had been so spectacular and of such magnitude as to defy understanding or description, what of this? When hundreds of thousands of Kedys, each wielding world-wrecking powers as effortlessly and as deftly and as precisely as thought, attacked and destroyed millions of those tremendously powerful war-fabrications of the Strettse? The only simple answer is that all nearby space might very well have been torn out of the most radiant layers of S-Doradus itself.

* * * * *

Hilton made the hundred yards from office door to curb in just over twelve seconds. Larry was waiting. The car literally burned a hole in the atmosphere as it screamed its way to Ardane Field.

It landed with a thump. Heavy black streaks of synthetic rubber marked the pavement as it came to a screeching, shrieking stop at the flagship's main lock. And, in the instant of closing that lock's outer portal, all twenty-thousand-plus warships of the task force took off as one at ten gravities. Took off, and in less than one minute went into overdrive.

All personal haste was now over. Hilton went up into what he still thought of as the "control room," even though he knew that there were no controls, nor even any instruments, anywhere aboard. He knew what he would find there. Fast as he had acted, Temple had not had as far to go and she had got there first.

He could not have said, for the life of him, how he actually felt about this direct defiance of his direct orders.

"I told you to stay home, Temple," he said.
"I know you did. But I'm not only the assistant head of your Psychology Department. I'm your wife, remember? 'Until death do us part.' And if there's any way in the universe I can manage it, death isn't going to part us--at least, this one isn't. If this is it, we'll go together."

"I know, sweetheart." He put his arm around her, held her close. "As a psych I wouldn't give a whoop. You'd be expendable. But as my wife, especially now that you're pregnant, you aren't. You're a lot more important to the future of our race than I am."

She stiffened in the circle of his arm. "What's that crack supposed to mean? Think I'd ever accept a synthetic zombie imitation of you for my husband and go on living with it just as though nothing had happened?"

Hilton started to say something, but Temple rushed heedlessly on: "Drat the race! No matter how many children we ever have you were first and you'll stay first, and if you have to go I'll go, too, so there! Besides, you know darn well that they can't duplicate whatever it is that makes you Jarvis Hilton."

"Now wait a minute, Tempy. The conversion ..."

"Yes, the conversion," she interrupted, triumphantly. "The thing I'm talking about is immaterial--untouchable--they didn't--couldn't--do anything about it at all. Kedy, will you please tell this big goofus that even though you have got Jarvis Hilton's brain you aren't Jarvis Hilton and never can be?"

* * * * *

The atmosphere of the room vibrated in the frequencies of a deep bass laugh. "You are trying to hold a completely untenable position, friend Hilton. Any attempt to convince a mind of real power that falsity is truth is illogical. My advice is for you to surrender."

That word hit Temple hard. "Not surrender, sweetheart. I'm not fighting you. I never will." She seized both of his hands; tears welled into her glorious eyes. "It's just that I simply couldn't stand it to go on living without you!"

"I know, darling." He got up and lifted her to her feet, so that she could come properly into his arms. They stood there, silent and motionless, for minutes.

Temple finally released herself and, after feeling for a handkerchief she did not have, wiped her eyes with a forefinger and then wiped the finger on her bare leg. She grinned and turned to the Omans. "Prince, will you and Dark Lady please conjure us up a steak-and-mushrooms supper? They should be in the pantry ... since this Sirius was designed for us."

After supper the two sat companionably on a davenport. "One thing about this business isn't quite clear," Temple said. "Why all this tearing rush? They haven't got the booster or anything like it, or they'd have used it. Surely it'll take them a long time to go from the mere analysis of the forces and fields we used clear through to the production and installation of enough weapons to stop this whole fleet?"

"It surely won't. They've had the absorption principle for ages. Remember that first, ancient skeleton that drained all the power of our suits and boats in nothing flat? From there it isn't too big a jump. And as for producing stuff; uh-uh! If there's any limit to what they can do, I don't know what it is. If we don't slug 'em before they get it, it's curtains."

"I see.... I'm afraid. We're almost there, darling."

He glanced at the chronometer. "About eleven minutes. And of course I don't need to ask you to stay out of the way."

"Of course not. I won't interfere, no matter what happens. All I'm going to do is hold your hand and pull for you with all my might."

"That'll help, believe me. I'm mighty glad you're along, sweetheart. Even though both of us know you shouldn't be."

* * * * *

The task force emerged. Each ship darted toward its pre-assigned place in a mathematically exact envelope around the planet Strett.

Hilton sat on a davenport strained and still. His eyes were closed and every muscle tense. Left hand gripped the arm-rest so fiercely that fingertips were inches deep in the leather-covered padding.

The Stretts knew that any such attack as this was futile. No movable structure or any combination of such structures could possibly wield enough power to break down screens powered by such engines as theirs.

Hilton, however, knew that there was a chance. Not with the first-stage boosters, which were manipulable and detonable masses of ball lightning, but with those boosters' culminations, the Vangs; which were ball lightning raised to the sixth power and which only the frightful energies of the boosters could bring into being.

But, even with twenty-thousand-plus Vangs--or any larger number--success depended entirely upon a nicety of timing never before approached and supposedly impossible. Not only to thousandths of a microsecond, but to a small fraction of one such thousandth: roughly, the time it takes light to travel three-sixteens of an inch.

It would take practically absolute simultaneity to overload to the point of burnout to those Strett generators.
They were the heaviest in the Galaxy.

That was why Hilton himself had to be there. He could not possibly have done the job from Ardvor. In fact, there was no real assurance that, even at the immeasurable velocity of thought and covering a mere million miles, he could do it even from his present position aboard one unit of the fleet. Theoretically, with his speed-up, he could. But that theory had yet to be reduced to practice.

Tense and strained, Hilton began his countdown.

Temple sat beside him. Both hands pressed his right fist against her breast. Her eyes, too, were closed; she was as stiff and as still as was he. She was not interfering, but giving; supporting him, backing him, giving to him in full flood everything of that tremendous inner strength that had made Temple Bells what she so uniquely was.

On the exact center of the needle-sharp zero beat every Kedy struck. Gripped and activated as they all were by Hilton's keyed-up-and-stretched-out mind, they struck in what was very close indeed to absolute unison.

Absorbing beams, each one having had precisely the same number of millimeters to travel, reached the screen at the same instant. They clung and sucked. Immeasurable floods of energy flashed from the Strett generators into those vortices to form twenty thousand-plus first-stage boosters.

* * * * *

But this time the boosters did not detonate.

Instead, as energies continued to flood in at a frightfully accelerating rate, they turned into something else. Things no Terran science has ever even imagined; things at the formation of which all neighboring space actually warped, and in that warping seethed and writhed and shuddered. The very sub-ether screamed and shrieked in protest as it, too, yielded in starkly impossible fashions to that irresistible stress.

How even those silicon-fluorine brains stood it, not one of them ever knew.

Microsecond by slow microsecond the Vangs grew and grew and grew. They were pulling not only the full power of the Ardan warships, but also the immeasurably greater power of the strainingly overloaded Strettsian generators themselves. The ethereal and sub-ethereal writhings and distortions and screamings grew worse and worse; harder and ever harder to bear.

Imagine, if you can, a constantly and rapidly increasing mass of plutonium—a mass already thousands of times greater than critical, but not allowed to react! That gives a faint and very inadequate picture of what was happening then.

Finally, at perhaps a hundred thousand times critical mass, and still in perfect sync, the Vangs all went off. The planet Strett became a nova.

"We won! We won!" Temple shrieked, her perception piercing through the hellish murk that was all nearby space.

"Not quite yet, sweet, but we're over the biggest hump," and the two held an impromptu, but highly satisfactory, celebration.

Perhaps it would be better to say that the planet Strett became a junior-grade nova, since the actual nova stage was purely superficial and did not last very long. In a couple of hours things had quieted down enough so that the heavily-screened warships could approach the planet and finish up their part of the job.

Much of Strett's land surface was molten lava. Much of its water was gone. There were some pockets of resistance left, of course, but they did not last long. Equally of course the Stretts themselves, twenty-five miles underground, had not been harmed at all.

But that, too, was according to plan.

* * * * *

Leaving the task force on guard, to counter any move the Stretts might be able to make, Hilton shot the Sirius out to the planet's moon. There Sawtelle and his staff and tens of thousands of Omans and machines were starting to work. No part of this was Hilton's job; so all he and Temple did was look on.

Correction, please. That was not all they did. But while resting and eating and loafing and sleeping and enjoying each other's company, both watched Operation Moon closely enough to be completely informed as to everything that went on.

Immense, carefully placed pits went down to solid bedrock. To that rock were immovably anchored structures strong enough to move a world. Driving units were installed—drives of such immensity of power as to test to the full the highest engineering skills of the Galaxy. Mountains of fuel-concentrate filled vast reservoirs of concrete. Each was connected to a drive by fifty-inch high-speed conveyors.

Sawtelle drove a thought and those brutal super-drives began to blast.

As they blasted, Strett's satellite began to move out of its orbit. Very slowly at first, but faster and faster. They continued to blast, with all their prodigious might and in carefully-computed order, until the desired orbit was attained—an orbit which terminated in a vertical line through the center of the Stretts' supposedly impregnable
The planet Strett had a mass of approximately seven times ten to the twenty-first metric tons. Its moon, little more than a hundredth as massive, still weighed in at about eight times ten to the nineteenth—that is, the figure eight followed by nineteen zeroes.

And moon fell on planet, in direct central impact, after having fallen from a height of over a quarter of a million miles under the full pull of gravity and the full thrust of those mighty atomic drives.

The kinetic energy of such a collision can be computed. It can be expressed. It is, however, of such astronomical magnitude as to be completely meaningless to the human mind.

Simply, the two worlds merged and splashed. Droplets, weighing up to millions of tons each, spattered out into space; only to return, in seconds or hours or weeks or months, to add their atrocious contributions to the enormity of the destruction already wrought.

No trace survived of any Strett or of any thing, however small, pertaining to the Stretts. 

Epilogue

As had become a daily custom, most of the Ardans were gathered at the natatorium. Hilton and Temple were wrestling in the water—she was trying to duck him and he was hard put to it to keep her from doing it. The platinum-haired twins were—oh, ever so surreptitiously and indetectably!—studying the other girls.

Captain Sawtelle—he had steadfastly refused to accept any higher title—and his wife were teaching two of their tiny grandchildren to swim.

In short, everything was normal.

Beverly Bell Poynter, from the top platform, hit the board as hard as she could hit it; and, perfectly synchronized with it, hurled herself upward. Up and up and up she went. Up to her top ceiling of two hundred ten feet. Then, straightening out into a shapely arrow and without again moving a muscle, she hurtled downward, making two and a half beautifully stately turns and striking the water with a slurping, splashless chug! Coming easily to the surface, she shook the water out of her eyes.

Temple, giving up her attempts to near-drown her husband, rolled over and floated quietly beside him.

"You know, this is fun," he said.

"Uh-huh," she agreed enthusiastically.

"I'm glad you and Sandy buried the hatchet. Two of the top women who ever lived. Or should I have said sheathed the claws? Or have you, really?"


A flitabout had come to ground. Dark Lady, who never delivered a message via thought if she could possibly get away with delivering it in person, was running full tilt across the sand toward them. Her long black hair was streaming out behind her; she was waving a length of teletype tape as though it were a pennon.

"Oh, no. Not again?" Temple wailed. "Don't tell us it's Terra again, Dark Lady, please."

"But it is!" Dark Lady cried, excitedly. "And it says 'From Five-Jet Admiral Gordon, Commanding.'"

"Omit flowers, please," Hilton directed. "Boil it down."

"The Perseus is in orbit with the whole Advisory Board. They want to hold a top-level summit conference with Director Hilton and Five-Jet Admiral Sawtelle." Dark Lady raised her voice enough to be sure Sawtelle heard the title, and shot him a wicked glance as she announced it. "They hope to conclude all unfinished business on a mutually satisfactory and profitable basis."

"Okay, Lady, thanks. Tell 'em we'll call 'em shortly."

Dark Lady flashed away and Hilton and Temple swam slowly toward a ladder.

"Drat Terra and everything and everybody on it," Temple said, vigorously. "And especially drat His Royal Fatness Five-Jet Admiral Gordon. How much longer will it take, do you think, to pound some sense into their pointed little heads?"

"Oh, we're not doing too bad," Hilton assured his lovely bride. "Two or three more sessions ought to do it."

Everything was normal….

END
THE FOURTH R
By George O. Smith

BOOK ONE:
FUTURE IMPROMPTU
CHAPTER ONE

James Quincy Holden was five years old.
His fifth birthday was not celebrated by the usual horde of noisy, hungry kids running wild in the afternoon. It started at seven, with cocktails. They were served by his host, Paul Brennan, to the celebrants, the boy's father and mother. The guest of honor sipped ginger ale and nibbled at canapés while he was presented with his gifts: A volume of Kipling's Jungle Tales, a Spitz Junior Planetarium, and a build-it-yourself kit containing parts for a geiger counter and an assortment of radioactive minerals to identify. Dinner was served at eight, the menu selected by Jimmy Holden—with the exception of the birthday cake and its five proud little candles which came as an anticipated surprise from his "Uncle" Paul Brennan.

After dinner, they listened to some music chosen by the boy, and the evening wound up with three rubbers of bridge. The boy won.

They left Paul Brennan's apartment just after eleven o'clock. Jimmy Holden was tired and pleasantly stuffed with good food. But he was stimulated by the party. So, instead of dropping off to sleep, he sat comfortably wedged between his father and mother, quietly lost in his own thoughts until the car was well out of town.

Then he said, "Dad, why did you make that sacrifice bid on the last hand?" Father and son had been partners.
"You're not concerned about losing the rubber, are you?" It had been the only rubber Jimmy lost.
"No. It's only a game," said Jimmy. "I'm just trying to understand."
His father gave an amused groan. "It has to do with the laws of probability and the theory of games," he said.

The boy shook his head. "Bridge," he said thoughtfully, "consists of creating a logical process of play out of a random distribution of values, doesn't it?"
"Yes, if you admit that your definition is a gross oversimplification. It would hardly be a game if everything could be calculated beforehand."
"But what's missing?"
"In any game there is the element of a calculated risk."

Jimmy Holden was silent for a half-mile thinking that one over. "How," he asked slowly, "can a risk be calculated?"

His father laughed. "In fine, it can't. Too much depends upon the personality of the individual."
"Seems to me," said Jimmy, "that there's not much point in making a bid against a distribution of values known to be superior. You couldn't hope to make it; Mother and Uncle Paul had the cards."

His father laughed again. "After a few more courses in higher mathematics, James, you'll begin to realize that some of the highest mathematics is aimed at predicting the unpredictable, or trying to lower the entropy of random behavior."

Jimmy Holden's mother chuckled. "Now explain entropy," she said. "James, what your father has been failing to explain is really not subject to simple analysis. Who knows why any man will hazard his hard-earned money on the orientation of a pair of dice? No amount of education nor academic study will explain what drives a man. Deep inside, I suppose it is the same force that drives everybody. One man with four spades will take a chance to see if he can make five, and another man with directorships in three corporations will strive to make it four."

Jimmy Holden's father chuckled. "Some families with one infant will try to make it two--"

"Not on your life!"

"--And some others are satisfied with what they've got," finished Jimmy Holden's father. "James, some men will avoid seeing what has to be done; some men will see it and do it and do no more; and a few men will see what has to be done, do it, and then look to the next inevitable problem created by their own act."

A blinding flash of light cut a swath across the road, dazzling them. Around the curve ahead, a car careened wide over the white line. His mother reached for him, his father fought the wheel to avoid the crash. Jimmy Holden both heard and felt the sharp Bang! as the right front tire went. The steering wheel snapped through his father's hands by half a turn. There was a splintering crash as the car shattered its way through the retaining fence, then came a fleeting moment of breathless silence as if the entire universe had stopped still for a heartbeat.

Chaos! His mother's automatic scream, his father's oath, and the rending crash split the silence at once. The car
bucked and flipped, the doors were slammed open and ripped off against a tree that went down. The car leaped in a
skew turn and began to roll and roll, shedding metal and humans as it racketed down the ravine.

Jimmy felt himself thrown free in a tumbleturn that ended in a heavy thud.

* * * * *

When breath and awareness returned, he was lying in a depression filled with soft rotting leaves.

He was dazed beyond hurt. The initial shock and bewilderment oozed out of him, leaving him with a feeling of
outrage, and a most peculiar sensation of being a spectator rather than an important part of the violent drama. It held
an air of unreality, like a dream that the near-conscious sleeper recognizes as a dream and lives through it because he
lacks the conscious will to direct it.

Strangely, it was as if there were three or more of him all thinking different things at the same time. He wanted
his mother badly enough to cry. Another part of him said that she would certainly be at his side if she were able.
Then a third section of his confused mind pointed out that if she did not come to him, it was because she herself was
hurt deeply and couldn't.

A more coldly logical portion of his mind was urging him to get up and do something about it. They had passed
a telephone booth on the highway; lying there whimpering wasn't doing anybody any good. This logical part of his
confused mind did not supply the dime for the telephone slot nor the means of scaling the heights needed to insert
the dime in the adult-altitude machine.

Whether the dazzle of mental activity was serial or simultaneous isn't important. The fact is that it was
completely disorganized as to plan or program, it leaped from one subject to another until he heard the scrabble and
scratch of someone climbing down the side of the ravine.

Any noise meant help. With relief, Jimmy tried to call out.

But with this arrival of help, afterfright claimed him. His mouth worked silently before a dead-dry throat and
his muscles twitched in uncontrolled nervousness; he made neither sound nor motion. Again he watched with the
unreal feeling of being a remote spectator. A cone of light from a flashlight darted about and it gradually seeped into
Jimmy's shocked senses that this was a new arrival, picking his way through the tangle of brush, following the trail
of ruin from the broken guard rail to the smashed car below.

The newcomer paused. The light darted forward to fall upon a crumpled mass of cloth.

With a toe, the stranger probed at crushed ribs. A pitifully feeble moan came from the broken rag doll that lay
on the ground. The searcher knelt with his light close to peer into the bloody face, and, unbelieving, Jimmy Holden
heard the voice of his mother straining to speak, "Paul--I--we--"

The voice died in a gurgle.

The man with the flashlight tested the flaccid neck by bending the head to one side and back sharply. He ended
this inspection by letting the head fall back to the moist earth. It landed with a thud of finality.

The cold brutality of this stranger's treatment of his mother shocked Jimmy Holden into frantic outrage. The
frozen cry for help changed into protesting anger; no one should be treated that--

"One!" muttered the stranger flatly.

Jimmy's burst of protest died in his throat and he watched, fascinated, as the stranger's light moved in a sweep
forward to stop a second time. "And there's number two!" The callous horror was repeated. Hypnotically, Jimmy
Holden watched the stranger test the temples and wrists and try a hand under his father's heart. He watched the
stranger make a detailed inspection of the long slash that laid open the entire left abdomen and he saw the red that
seeped but did not flow.

"That's that!" said the stranger with an air of finality. "Now--" and he stood up to swing his flashlight in
widening circles, searching the area carefully.

* * * * *

Jimmy Holden did not sicken. He went cold. He froze as the dancing flashlight passed over his head, and
relaxed partially when it moved away in a series of little jumps pausing to give a steady light for close inspection.
The light swung around and centered on the smashed automobile. It was upside down, a ruin with one wheel still
turning idly.

The stranger went to it, and knelt to peer inside. He pried ripped metal away to get a clear sight into the crushed
interior. He went flat on his stomach and tried to penetrate the area between the crumpled car-top and the bruised
ground, and he wormed his way in a circle all around the car, examining the wreck minutely.

The sound of a distant automobile engine became audible, and the searching man mumbled a curse. With haste
he scrambled to his feet and made a quick inspection of the one wobbly-turning wheel. He stripped a few shards of
rubber away, picked at something in the bent metal rim, and put whatever he found in his pocket. When his hand
came from the pocket it held a packet of paper matches. With an ear cocked at the road above and the sound of the
approaching car growing louder, the stranger struck one match and touched it to the deck of matches. Then with a
callous gesture he tossed the flaring pack into a pool of spilled gasoline. The fuel went up in a blunt whoosh!

The dancing flames revealed the face of Jimmy Holden's "Uncle" Paul Brennan, his features in a mask that Jimmy Holden had never seen before.

With the determined air of one who knows that still another piece lies hidden, Paul Brennan started to beat back and forth across the trail of ruin. His light swept the ground like the brush of a painter, missing no spot. Slowly and deliberately he went, paying no attention to the creeping tongues of flame that crept along damp trails of spilled gasoline.

Jimmy Holden felt helplessly alone.

For "Uncle" Paul Brennan was the laughing uncle, the golden uncle; his godfather; the bringer of delightful gifts and the teller of fabulous stories. Classmate of his father and admirer of his mother, a friend to be trusted as he trusted his father and mother, as they trusted Paul Brennan. Jimmy Holden did not and could not understand, but he could feel the presence of menace. And so with the instinct of any trapped animal, he curled inward upon himself and cringed.

Education and information failed. Jimmy Holden had been told and told and instructed, and the words had been graven deep in his mind by the same fabulous machine that his father used to teach him his grammar and his vocabulary and his arithmetic and the horde of other things that made Jimmy Holden what he was: "If anything happens to us, you must turn to Paul Brennan!"

But nothing in his wealth of extraordinary knowledge covered the way to safety when the trusted friend turned fiend.

* * * * *

Shaken by the awful knowledge that all of his props had been kicked out from under him, now at last Jimmy Holden whimpered in helpless fright. Brennan turned towards the sound and began to beat his way through the underbrush.

Jimmy Holden saw him coming. It was like one of those dreams he'd had where he was unable to move, his muscles frozen, as some unknown horror stalked him. It could only end in a terrifying fall through cold space towards a tremendous lurch by the bedsprings that brought little comfort until his pounding heart came back to normal. But this was no dream; it was a known horror that stalked him, and it could not end as a dream ends. It was reality.

The horror was a close friend turned animal, and the end was more horrible because Jimmy Holden, like all other five-year-olds, had absolutely no understanding nor accurate grasp of the concept called death. He continued to whimper even though he realized that his fright was pointing him out to his enemy. And yet he had no real grasp of the concept enemy. He knew about pain; he had been hurt. But only by falls, simple misadventures, the needles of inoculation administered by his surgeon mother, a paddling for mischief by his engineer father.

But whatever unknown fate was coming was going to be worse than "hurt." It was frightful.

Then fate, assisted by Brennan's own act of trying to obliterate any possible evidence by fire, attracted a savior. The approaching car stopped on the road above and a voice called out, "Hello, down there!"

Brennan could not refuse to answer; his own car was in plain sight by the shattered retaining fence. He growled under his breath, but he called back, "Hello, the road! Go get the police!"

"Can we help?"
"Beyond help!" cried Brennan. "I'm all right. Get the cops!"

The car door slammed before it took off. Then came the unmistakable sounds of another man climbing down the ravine. A second flashlight swung here and there until the newcomer faced Brennan in the little circle of light.

"What happened?" asked the uninvited volunteer.

Brennan, whatever his thoughts, said in a voice filled with standard concern: "Blowout. Then everything went blooey."

"Anyone--I mean how many--?"
"Two dead," said Brennan, and then added because he had to, "and a little boy lost."

The stranger eyed the flames and shuddered. "In there?"
"Parents were tossed out. Boy's missing."

"Bad," said the stranger. "God, what a mess. Know 'em?"

"Holdens. Folks that live in the big old house on the hill. My best friend and his wife. I was following them home," lied Brennan glibly. "C'mon let's see if we can find the kid. What about the police?"

"Sent my wife. Telephone down the road."

Paul Brennan's reply carried no sound of disappointment over being interrupted. "Okay. Let's take a look. You take it that way, and I'll cover this side."

The little-boy mind did not need its extensive education to understand that Paul Brennan needed no more than a
few seconds of unobserved activity, after which he could announce the discovery of the third death in a voice cracked with false grief.

Animal instinct took over where intelligence failed. The same force that caused Jimmy Holden to curl within himself now caused him to relax; help that could be trusted was now at hand. The muscles of his throat relaxed. He whimpered. The icy paralysis left his arms and legs; he kicked and flailed. And finally his nervous system succeeded in making their contact with his brain; the nerves carried the pain of his bumps and scratches, and Jimmy Holden began to hurt. His stifled whimper broke into a shuddering cry, which swiftly turned into sobbing hysteria.

He went out of control. Nothing, not even violence, would shake him back until his accumulation of shock upon shock had been washed away in tears.

The sound attracted both men. Side by side they beat through the underbrush. They reached for him and Jimmy turned toward the stranger. The man picked the lad out of the bed of soft rotting leaves, cradled him and stroked his head. Jimmy wrapped his small arms around the stranger's neck and held on for life.

"I'll take him," said Brennan, reaching out.

Jimmy's clutch on the stranger tightened.

"You won't pry him loose easily," chuckled the man. "I know. I've got a couple of these myself."

Brennan shrugged. "I thought perhaps--"

"Forget it," said the stranger. "Kid's had trouble. I'll carry him to the road, you take him from there."

"Okay."

Getting up the ravine was a job of work for the man who carried Jimmy Holden. Brennan gave a hand, aided with a lift, broke down brush, and offered to take Jimmy now and again. Jimmy only clung tighter, and the stranger waved Brennan away with a quick shake of his head.

By the time they reached the road, sirens were wailing on the road up the hill. Police, firemen, and an ambulance swarmed over the scene. The firemen went to work on the flaming car with practiced efficiency; the police clustered around Paul Brennan and extracted from him a story that had enough truth in it to sound completely convincing. The doctors from the ambulance took charge of Jimmy Holden. Lacking any other accident victim, they went to work on him with everything they could do.

They gave him mild sedation, wrapped him in a warm blanket, and put him to bed on the cot in the ambulance with two of them watching over him. In the presence of so many solicitous strangers, Jimmy's shock and fright diminished. The sedation took hold. He dropped off in a light doze that grew less fitful as time went on. By the time the official accident report program was over, Jimmy Holden was fast asleep and resting comfortably.

He did not hear Paul Brennan's suggestion that Jimmy go home with him, to Paul Brennan's personal physician, nor did Jimmy hear the ambulance attendants turn away Brennan's suggestion with hard-headed medical opinion. Brennan could hardly argue with the fact that an accident victim would be better off in a hospital under close observation. Shock demanded it, and there was the hidden possibility of internal injury or concussion to consider.

So Jimmy Holden awoke with his accident ten hours behind him, and the good sleep had completed the standard recuperative powers of the healthy child. He looked around, collecting himself, and then remembered the accident. He cringed a bit and took another look and identified his surroundings as some sort of a children's ward or dormitory.

He was in a crib.

He sat up angrily and rattled the gate of the crib. Putting James Quincy Holden in a baby's crib was an insult.

He stopped, because the noise echoed through the room and one of the younger patients stirred in sleep and moaned. Jimmy Holden sat back and remembered. The vacuum that was to follow the loss of his parents was not yet in evidence. They were gone and the knowledge made him unhappy, but he was not cognizant of the real meaning or emotion of grief. With almost the same feeling of loss he thought of the Jungle Book he would never read and the Spitz Planetarium he would never see casting its little star images on his bedroom ceiling. Burned and ruined, with the atomic energy kit—and he had hoped that he could use the kit to tease his father into giving him some education in radioactivity. He was old enough to learn--

Learn--?

No more, now that his father and mother were dead.

Some of the real meaning of his loss came to him then, and the growing knowledge that this first shocking loss meant the ultimate loss of everything was beginning to sink in.

He broke down and cried in the misery of his loss and his helplessness; ultimately his emotion began to cry itself out, and he began to feel resentment against his position. The animal desire to bite back at anything that moved did not last long, it focused properly upon the person of his tormentor. Then for a time, Jimmy Holden's imagination indulged in a series of little vignettes in which he scored his victory over Paul Brennan. These little playlets went through their own evolution, starting with physical victory reminiscent of his Jack-and-the-Beanstalk days to a more
advanced triumph of watching Paul Brennan led away in handcuffs whilst the District Attorney scanned the sheaf of indisputable evidence provided by James Quincy Holden.

Somewhere along about this point in his fantasy, a breath of the practical entered, and Jimmy began to consider the more sensible problem of what sort of information this sheaf of evidence would contain.

Still identifying himself with the books he knew, Jimmy Holden had progressed from the fairy story--where the villain was evil for no more motive than to provide menace to the hero--to his more advanced books, where the villain did his evil deeds for the logical motive of personal gain.

Well, what had Paul Brennan to gain?

Money, for one thing--he would be executor of the Holden Estate. But there wasn't enough to justify killing. Revenge? For what? Jealousy? For whom? Hate? Envy? Jimmy Holden glossed the words quickly, for they were no more than words that carried definitions that did not really explain them. He could read with the facility of an adult, but a book written for a sophisticated audience went over his head.

No, there was only one possible thing of appreciable value; the one thing that Paul Brennan hoped to gain was the device over which they had worked through all the long years to perfect: The Holden Electromechanical Educator! Brennan wanted it badly enough to murder for its possession!

And with a mind and ingenuity far beyond his years, Jimmy Holden knew that he alone was the most active operator in this vicious drama. It was not without shock that he realized that he himself could still be killed to gain possession of his fabulous machine. For only with all three Holdens dead could Paul Brennan take full and unquestioned possession.

With daylight clarity he knew what he had to do. In a single act of destruction he could simultaneously foil Paul Brennan's plan and ensure his own life.

Permanently installed in Jimmy Holden's brain by the machine itself were the full details of how to recreate it. Indelibly he knew each wire and link, lever and coil, section by section and piece by piece. It was incomprehensible information, about in the same way that the printing press "knows" the context of its metal plate. Step by step he could rebuild it once he had the means of procuring the parts, and it would work even though he had not the foggiest notion (now) of what the various parts did.

So if the delicate heart of his father's machine were utterly destroyed, Paul Brennan would be extremely careful about preserving the life of James Quincy Holden.

Physically, he was a five-year-old. He stood forty-one inches tall and weighed thirty-nine pounds. A machinist's hammer was a two-handed tool and a five-pound sack of sugar was a burden. Doorknobs and latches were a problem in manipulation. The negotiation of a swinging door was a feat of muscular engineering. Electric light switches were placed at a tiptoe reach because, naturally, everything in the adult world is designed by the adults for the convenience of adults. This makes it difficult for the child who has no adult to do his bidding.

Intellectually, Jimmy Holden was something else.

Reverting to a curriculum considered sound prior to Mr. Dewey's often-questionable and more often misused programs of schooling, Jimmy's parents had trained and educated their young man quite well in the primary informations of fact. He read with facility and spoke with a fine vocabulary--although no amount of intellectual training could make his voice change until his glands did. His knowledge of history, geography and literature were good, because he'd used them to study reading. He was well into plane geometry and had a smattering of algebra, and there had been a pause due to a parental argument as to the advisability of his memorizing a table of six-place logarithms via the Holden machine.

Extra-curricularly, Jimmy Holden had acquired snippets, bits, and wholesale chunks of a number of the arts and sciences and other aggregations of information both pertinent and trivial for one reason or another. As an instance, he had absorbed an entire bridge book by Charles Goren just to provide a fourth to sit in with his parents and Paul Brennan.

Consequently, James Holden had in data the education of a boy of about sixteen, and in other respects, much more.

He escaped from the hospital simply because no one ever thought that a five-year-old boy would have enough get-up-and-go to climb out of his crib, rummage a nearby closet, dress himself, and then calmly walk out. The clothing of a cocky teen-ager would have been impounded and his behavior watched.

They did not miss him for hours. He went, taking the little identification card from its frame at the foot of his bed--and that ruined the correlation between tag and patient.

By the time an overworked nurse stopped to think and finally asked, "Kitty, are you taking care of the little boy in Bed 6 over in 219?" and received the answer, "No, aren't you?" Jimmy Holden was trudging up the hill towards
his home. Another hour went by with the two worried nurses surreptitiously searching the rest of the hospital in the simple hope that he had wandered away and could be restored before it came to the attention of the officials. By the time they gave up and called in other nurses (who helped them in their anxiety to conceal) Jimmy was entering his home.

Each succeeding level of authority was loath to report the truth to the next higher up.

By the time the general manager of the hospital forced himself to call Paul Brennan, Jimmy Holden was demolishing the last broken bits of disassembled subassemblies he had smashed from the heart-circuit of the Holden Electromechanical Educator. He was most thorough. Broken glass went into the refuse buckets, bent metal was buried in the garden, inflammables were incinerated, and meltables and fusibles slagged down in ashes that held glass, bottle, and empty tin-can in an unrecognizable mass. He left a gaping hole in the machine that Brennan could not fill--nor could any living man fill it now but James Quincy Holden.

And only when this destruction was complete did Jimmy Holden first begin to understand his father's statement about the few men who see what has to be done, do it, and then look to the next inevitable problem created by their own act.

It was late afternoon by the time Jimmy had his next moves figured out. He left the home he'd grown up in, the home of his parents, of his own babyhood. He'd wandered through it for the last time, touching this and saying goodbye to that. He was certain that he would never see his things again, nor the house itself, but the real vacuum of his loss hadn't yet started to form. The concepts of "never" and "forever" were merely words that had no real impact.

So was the word "Farewell."

But once his words were said, Jimmy Holden made his small but confident way to the window of a railroad ticket agent.

CHAPTER TWO

You are a ticket agent, settled in the routine of your job. From nine to five-thirty, five days a week, you see one face after another. There are cheerful faces, sullen faces, faces that breathe garlic, whiskey, chewing gum, toothpaste and tobacco fumes. Old faces, young faces, dull faces, scarred faces, clear faces, plain faces and faces so plastered with makeup that their nature can't be seen at all. They bark place-names at you, or ask pleasantly about the cost of round-trip versus one-way tickets to Chicago or East Burlap. You deal with them and then you wait for the next.

Then one afternoon, about four o'clock, a face barely visible over the edge of the marble counter looks up at you with a boy's cheerful freckled smile. You have to stand up in order to see him. You smile, and he grins at you. Among his belongings is a little leather suitcase, kid's size, but not a toy. He is standing on it. Under his arm is a collection of comic books, in one small fist is the remains of a candy bar and in the other the string of a floating balloon.

"Well, young man, where to? Paris? London? Maybe Mars?"

"No, sir," comes the piping voice, "Roun-tree."

"Roundtree? Yes, I've heard of that metropolis," you reply. You look over his head, there aren't any other customers in line behind him so you don't mind passing the time of day. "Round-trip or one-way?"

"One-way," comes the quick reply.

This brings you to a slow stop. He does not giggle nor prattle, nor launch into a long and involved explanation with halting, dependent clauses. This one knows what he wants and how to ask for it. Quite a little man!

"How old are you, young fellow?"

"I was five years old yesterday."

"What's your name?"

"I'm James Holden."

The name does not ring any bells--because the morning newspaper is purchased for its comic strips, the bridge column, the crossword and the latest dope on love-nest slayings, peccadilloes of the famous, the cheesecake photo of the inevitable actress-leaving-for-somewhere, and the full page photograph of the latest death-on-the-highway debacle. You look at the picture but you don't read the names in the caption, so you don't recognize the name, and you haven't been out of your little cage since lunchtime and Jimmy Holden was not missing then. So you go on:

"So you're going to go to Roundtree."

"Yessir."

"That costs a lot of money, young Mister Holden."

"Yessir." Then this young man hands you an envelope; the cover says, typewritten: Ticket Clerk, Midland Railroad.

A bit puzzled, you open the envelope and find a five-dollar bill folded in a sheet of manuscript paper. The note says:
Ticket Clerk Midland Railroad Dear Sir:

This will introduce my son, James Holden. As a birthday present, I am sending him for a visit to his grandparents in Roundtree, and to make the adventure complete, he will travel alone. Pass the word along to keep an eye on him but don't step in unless he gets into trouble. Ask the dining car steward to see that he eats dinner on something better than candy bars.

Otherwise, he is to believe that he is making this trip completely on his own.

Sincerely, Louis Holden.

PS: Divide the change from this five dollars among you as tips. L.H.

And so you look down at young Mister Holden and get a feeling of vicarious pleasure. You stamp his ticket and hand it to him with a gesture. You point out the train-gate he is to go through, and you tell him that he is to sit in the third railroad car. As he leaves, you pick up the telephone and call the station-master, the conductor, and since you can't get the dining-car steward directly, you charge the conductor with passing the word along.

Then you divide the change. Of the two-fifty, you extract a dollar, feeling that the Senior Holden is a cheapskate. You slip the other buck and a half into an envelope, ready for the conductor's hand. He'll think Holden Senior is more of a cheapskate, and by the time he extracts his cut, the dining car steward will know that Holden Senior is a cheapskate. But--

Then a face appears at your window and barks, "Holyoke, Mass.," and your normal day falls back into shape.

The response of the people you tell about it varies all the way from outrage that anybody would let a kid of five go alone on such a dangerous mission to loud bragging that he, too, once went on such a journey, at four and a half, and didn't need a note.

But Jimmy Holden is gone from your window, and you won't know for at least another day that you've been suckered by a note painstakingly typewritten, letter by letter, by a five-year-old boy who has a most remarkable vocabulary.

Jimmy's trip to Roundtree was without incident. Actually, it was easy once he had hurdled the ticket-seller with his forged note and the five-dollar bill from the cashbox in his father's desk. His error in not making it a ten was minor; a larger tip would not have provided him with better service, because the train crew were happy to keep an eye on the adventurous youngster for his own small sake. Their mild resentment against the small tip was directed against the boy's father, not the young passenger himself.

He had one problem. The train was hardly out of the station before everybody on it knew that there was a five-year-old making a trip all by himself. Of course, he was not to be bothered, but everybody wanted to talk to him, to ask him how he was, to chatter endlessly at him. Jimmy did not want to talk. His experience in addressing adults was exasperating. That he spoke lucid English instead of babygab did not compel a rational response. Those who heard him speak made over him with the same effusive superiority that they used in applauding a golden-haired tot in high heels and a strapless evening gown sitting on a piano and singing, Why Was I Born? in a piping, uncertain-toned voice. It infuriated him.

So he immersed himself in his comic books. He gave his name politely every five minutes for the first fifty miles. He turned down offers of candy with, "Mommy says I mustn't before supper." And when dinnertime came he allowed himself to be escorted through the train by the conductor, because Jimmy knew that he couldn't handle the doors without help.

The steward placed a menu in front of him, and then asked carefully, "How much money do you want to spend, young man?"

Jimmy had the contents of his father's cashbox pinned to the inside of his shirt, and a five-dollar bill folded in a snap-top purse with some change in his shirt pocket. He could add with the best of them, but he did not want any more attention than he was absolutely forced to attract. So he fished out the snap-top purse and opened it to show the steward his five-dollar bill. The steward relaxed; he'd had a moment of apprehension that Holden Senior might have slipped the kid a half-dollar for dinner. (The steward had received a quarter for his share of the original two-fifty.)

Jimmy looked at the "Child's Dinner" menu and pointed out a plate: lamb chop and mashed potatoes. After that, dinner progressed without incident. Jimmy topped it off with a dish of ice cream.

The steward made change. Jimmy watched him carefully, and then said, "Daddy says I'm supposed to give you a tip. How much?"

The steward looked down, wondering how he could explain the standard dining car tip of fifteen or twenty percent of the bill. He took a swallow of air and picked out a quarter. "This will do nicely," he said and went off thankful that all people do not ask waiters how much they think they deserve for the service rendered.

Thus Jimmy Holden arrived in Roundtree and was observed and convoyed--but not bothered--off the train.

It is deplorable that adults are not as friendly and helpful to one another as they are to children; it might make for a more pleasant world. As Jimmy walked along the station platform at Roundtree, one of his former fellow-
passengers walked beside him. "Where are you going, young man? Someone going to meet you, of course?"

"No, sir," said Jimmy. "I'm supposed to take a cab--"

"I'm going your way, why not ride along with me?"

"Sure it's all right?"

"Sure thing. Come along." Jimmy never knew that this man felt good for a week after he'd done his good turn for the year.

His grandfather opened the door and looked down at him in complete surprise. "Why, Jimmy! What are you doing here? Who brought--"

His grandmother interrupted, "Come in! Come in! Don't just stand there with the door open!"

Grandfather closed the door firmly, grandmother knelt and folded Jimmy in her arms and crooned over him, "You poor darling. You brave little fellow. Donald," she said firmly to her husband, "go get a glass of warm milk and some cookies." She led Jimmy to the old-fashioned parlor and seated him on the sofa. "Now, Jimmy, you relax a moment and then you can tell me what happened."

Jimmy sighed and looked around. The house was old, and comfortably sturdy. It gave him a sense of refuge, of having reached a safe haven at last. The house was over-warm, and there was a musty smell of over-aged furniture, old leather, and the pungence of mothballs. It seemed to generate a feeling of firm stability. Even the slightly stale air--there probably hadn't been a wide open window since the storm sashes were installed last autumn--provided a locked-in feeling that conversely meant that the world was locked out.

Grandfather brought in the glass of warmed milk and a plate of cookies. He sat down and asked, "What happened, Jimmy?"

"My mother and father are--"

"You eat your cookies and drink your milk," ordered his grandmother. "We know. That Mr. Brennan sent us a telegram."

* * * * *

It was slightly more than twenty-four hours since Jimmy Holden had blown out the five proud candles on his birthday cake and begun to open his fine presents. Now it all came back with a rush, and when it came back, nothing could stop it.

Jimmy never knew how very like a little boy of five he sounded that night. His speech was clear enough, but his troubled mind was too full to take the time to form his headlong thoughts into proper sentences. He could not pause to collect his thoughts into any chronology, so it came out going back and forth all in a single line, punctuated only by necessary pauses for the intake of breath. He was close to tears before he was halfway through, and by the time he came to the end he stopped in a sob and broke out crying.

His grandfather said, "Jimmy, aren't you exaggerating? Mr. Brennan isn't that sort of a man."

"He is too!" exploded Jimmy through his tears. "I saw him!"

"But--"

"Donald, this is no time to start cross-examining a child." She crossed the room and lifted him onto her lap; she stroked his head and held his cheek against her shoulder. His open crying subsided into deep sobs; from somewhere she found a handkerchief and made him blow his nose--once, twice, and then a deep thrice. "Get me a warm washcloth," she told her husband, and with it she wiped away his tears. The warmth soothed Jimmy more.

"Now," she said firmly, "before we go into this any more we'll have a good night's sleep."

The featherbed was soft and cozy. Like protecting mother-wings, it folded Jimmy into its bosom, and the warm softness drew out of Jimmy whatever remained of his stamina. Tonight he slept of weariness and exhaustion, not of the sedation given last night. Here he felt at home, and it was good.

And as tomorrows always had, tomorrow would take care of itself.

Jimmy Holden's father and mother first met over an operating table, dressed in the white sterility that leaves only the eyes visible. She wielded the trephine that laid the patient's brain bare, he kept track of the patient's life by observing the squiggles on the roll of graph paper that emerged from his encephalograph. She knew nothing of the craft of the delicate instrument-creator, and he knew even less of the craft of surgery. There had been a near-argument during the cleaning-up session after the operation; the near-argument ended when they both realized that neither of them understood a word of what the other was saying. So the near-argument became an animated discussion, the general meaning of which became clear: Brain surgeons should know more about the intricacies of electromechanics, and the designers of delicate, precision instrumentation should know more about the mass of human gray matter they were trying to measure.

They pooled their intellects and plunged into the problem of creating an encephalograph that would record the infinitesimal irregularities that were superimposed upon the great waves. Their operation became large; they bought the old structure on top of the hill and moved in, bag and baggage. They cohabited but did not live together for
almost a year; Paul Brennan finally pointed out that Organized Society might permit a couple of geniuses to become research hermits, but Organized Society still took a dim view of cohabitation without a license. Besides, such messy arrangements always cluttered up the legal clarity of chattels, titles, and estates.

They married in a quiet ceremony about two years prior to the date that Louis Holden first identified the fine-line wave-shapes that went with determined ideas. When he recorded them and played them back, his brain re-traced its original line of thought, and he could not even make a mental revision of the way his thoughts were arranged. For two years Louis and Laura Holden picked their way slowly through this field; stumped at one point for several months because the machine was strictly a personal proposition. Recorded by one of them, the playback was clear to that one, but to the other it was wild gibberish—an inexplicable tangle of noise and colored shapes, odors and tastes both pleasant and nasty, and mingled sensations. It was five years after their marriage before they found success by engraving information in the brain by sitting, connected to the machine, and reading aloud, word for word, the information that they wanted.

It went by rote, as they had learned in childhood. It was the tiresome repetition of going over and over and over the lines of a poem or the numbers of the multiplication table until the pathway was a deeply trodden furrow in the brain. Forever imprinted, it was retained until death. Knowledge is stored by rote.

To accomplish this end, Louis Holden succeeded in violating all of the theories of instrumentation by developing a circuit that acted as a sort of reverberation chamber which returned the wave-shape played into it back to the same terminals without interference, and this single circuit became the very heart of the Holden Electromechanical Educator.

With success under way, the Holdens needed an intellectual guinea pig, a virgin mind, an empty store-house to fill with knowledge. They planned a twenty-year program of research, to end by handing their machine to the world complete with its product and instructions for its use and a list of pitfalls to avoid.

The conception of James Quincy Holden was a most carefully-planned parenthood. It was not accomplished without love or passion. Love had come quietly, locking them together physically as they had been bonded intellectually. The passion had been deliberately provoked during the proper moment of Laura Holden's cycle of ovulation. This scientific approach to procreation was no experiment, it was the foregone-conclusive act to produce a component absolutely necessary for the completion of their long program of research. They happily left to Nature's Choice the one factor they could not control, and planned to accept an infant of either sex with equal welcome. They loved their little boy as they loved one another, rejoiced with him, despised with him, and made their own way with success and mistake, and succeeded in bringing Jimmy to five years of age quite normal except for his education.

Now, proficiency in brain surgery does not come at an early age, nor does world-wide fame in the field of delicate instrumentation. Jimmy's parents were over forty-five on the date of his birth. Jimmy's grandparents were, then, understandably aged seventy-eight and eighty-one.

The old couple had seen their life, and they knew it for what it was. They arose each morning and faced the day knowing that there would be no new problem, only recurrence of some problem long solved. Theirs was a comfortable routine, long gone was their spirit of adventure, the pleasant notions of trying something a new and different way. At their age, they were content to take the easiest and the simplest way of doing what they thought to be Right. Furthermore, they had lived long enough to know that no equitable decision can be made by listening to only one side of any argument.

While young Jimmy was polishing off a platter of scrambled eggs the following morning, Paul Brennan arrived. Jimmy's fork stopped in midair at the sound of Brennan's voice in the parlor.

"You called him," he said accusingly.

Grandmother Holden said, "He's your legal guardian, James."

"But--I don't--can't--"

"Now, James, your father and mother knew best."

"But they didn't know about Paul Brennan. I won't go!"

"You must."

"I won't!"

"James," said Grandmother Holden quietly, "you can't stay here."

"Why not?"

"We're not prepared to keep you."

"Why not?"

Grandmother Holden despaired. How could she make this youngster understand that eighty is not an age at which to embark upon the process of raising a five-year-old to maturity?

From the other room, Paul Brennan was explaining his side as he'd given it to the police. "--Forgot the land
option that had to be signed. So I took off after them and drove fast enough to catch up. I was only a couple of hundred yards behind when it happened."

"He's a liar!" cried Jimmy Holden.
"That's not a nice thing to say."
"It's true!"
"Jimmy!" came the reproachful tone.
"It's true!" he cried.

His grandfather and Paul Brennan came into the kitchen. "Ah, Jimmy," said Paul in a soothing voice, "why did you run off? You had everybody worried."

"You did! You lie! You--"
"James!" snapped his grandfather. "Stop that talk at once!"

"Be easy with him, Mr. Holden. He's upset. Jimmy, let's get this settled right now. What did I do and how do I lie?"

"Oh, please Mr. Brennan," said his grandmother. "This isn't necessary."
"Oh, but it is. It is very important. As the legal guardian of young James, I can't have him harboring some suspicion as deep as this. Come on, Jimmy. Let's talk it out right now. What did I do and how am I lying?"

"You weren't behind. You forced us off the road."
"How could he, young man?" demanded Grandfather Holden.
"I don't know, but he did."

"Wait a moment, sir," said Brennan quietly. "It isn't going to be enough to force him into agreement. He's got to see the truth for itself, of his own construction from the facts. Now, Jimmy, where was I when you left my apartment?"

"You--you were there."
"And didn't I say--"
"One moment," said Grandfather Holden. "Don't lead the witness."
"Sorry. James, what did I do?"
"You--" then a long pause.
"Come on, Jimmy."
"You shook hands with my father."
"And then?"
"Then you--kissed my mother on the cheek."
"And then, again?"
"And then you carried my birthday presents down and put them in the car."
"Now, Jimmy, how does your father drive? Fast or slow?"
"Fast."

"So now, young man, you tell me how I could go back up to my apartment, get my coat and hat, get my car out of the garage, and race to the top of that hill so that I could turn around and come at you around that curve? Just tell me that, young man."

"I--don't know--how you did it."
"It doesn't make sense, does it?"
"--No--"

"Jimmy, I'm trying to help you. Your father and I were fraternity brothers in college. I was best man at your parents' wedding. I am your godfather. Your folks were taken away from both of us--and I'm hoping to take care of you as if you were mine." He turned to Jimmy's grandparents. "I wish to God that I could find the driver of that other car. He didn't hit anybody, but he's as guilty of a hit-and-run offence as the man who does. If I ever find him, I'll have him in jail until he rots!"

"Jimmy," pleaded his grandmother, "can't you see? Mr. Brennan is only trying to help. Why would he do the evil thing you say he did?"

"Because--" and Jimmy started to cry. The utter futility of trying to make people believe was too much to bear.


"Jimmy, believe me," pleaded Brennan. "I'm going to take you to live in your old house, among your own things. I can't replace your folks, but I can try to be as close to your father as I know how. I'll see you through everything, just as your mother and father want me to."

"No!" exploded Jimmy through a burst of tears.
Grandfather Holden grunted. "This is getting close to the tantrum stage," he said. "And the only way to deal with a tantrum is to apply the flat of the hand to the round of the bottom."

"Please," smiled Brennan. "He's a pretty shaken youngster. He's emotionally hurt and frightened, and he wants to strike out and hurt something back."

"I think he's done enough of that," said Grandfather Holden. "When Louis tossed one of these fits of temper where he wouldn't listen to any reason, we did as we saw fit anyway and let him kick and scream until he got tired of the noise he made."

"Let's not be rough," pleaded Jimmy's grandmother. "He's just a little boy, you know."

"If he weren't so little he'd have better sense," snapped Grandfather.

"James," said Paul Brennan quietly, "do you see you're making trouble for your grandparents? Haven't we enough trouble as it is? Now, young man, for the last time, will you walk or will you be carried? Whichever, Jimmy, we're going back home!"

James Holden gave up. "I'll go," he said bitterly, "but I hate you."

"He'll be all right," promised Brennan. "I swear it!"

"Please, Jimmy, be good for Mr. Brennan," pleaded his grandmother. "After all, it's for your own good." Jimmy turned away, bewildered, hurt and silent. He stubbornly refused to say goodbye to his grandparents.

He was trapped in the world of grown-ups that believed a lying adult before they would even consider the truth of a child.

CHAPTER THREE

The drive home was a bitter experience. Jimmy was sullen, and very quiet. He refused to answer any question and he made no reply to any statement. Paul Brennan kept up a running chatter of pleasantries, of promises and plans for their future, and just enough grief to make it sound honest. Had Paul Brennan actually been as honest as his honeyed tones said he was, no one could have continued to accuse him. But no one is more difficult to fool than a child—even a normal child. Paul Brennan's protestations simply made Jimmy Holden bitter.

He sat silent and unhappy in the far corner of the front seat all the way home. In his mind was a nameless threat, a dread of what would come once they were inside—either inside of Paul Brennan's apartment or inside of his own home—with the door locked against the outside world.

But when they arrived, Paul Brennan continued his sympathetic attitude. To Jimmy it was sheer hypocrisy; he was not experienced enough to know that a person can commit an act and then convince himself that he hadn't.

"Jimmy," said Brennan softly, "I have not the faintest notion of punishment. None whatsoever. You ruined your father's great invention. You did that because you thought it was right. Someday when you change your mind and come to believe in me, I'll ask you to replace it because I know you can. But understand me, young man, I shall not ask you until you make the first suggestion yourself!"

Jimmy remained silent.

"One more thing," said Brennan firmly. "Don't try that stunt with the letter to the station agent again. It won't work twice. Not in this town nor any other for a long, long time. I've made a sort of family-news item out of it which hit a lot of daily papers. It'll also be in the company papers of all the railroads and buslines, how Mr. What's-his-name at the Midland Railroad got suckered by a five-year-old running away from home. Understand?"

Jimmy understood but made no sign.

"Then in September we'll start you in school," said Brennan.

This statement made no impression upon young James Holden whatsoever. He had no intention of enduring this smothering by overkindness any longer than it took him to figure out how to run away, and where to run to. It was going to be a difficult thing. Cruel treatment, torture, physical harm were one thing; this act of being a deeply-concerned guardian was something else. A twisted arm he could complain about, a bruise he could show, the scars of lashing would give credence to his tale. But who would listen to any complaint about too much kindness?

Six months of this sort of treatment and Jimmy Holden himself would begin to believe that his parents were monsters, coldly stuffing information in the head of an infant instead of letting him grow through a normal childhood. A year, and Jimmy Holden would be re-creating his father's reverberation circuit out of sheer gratitude. He'd be cajoled into signing his own death-warrant.

But where can a five-year-old hide? There was no appeal to the forces of law and order. They would merely pop him into a squad car and deliver him to his guardian.

Law and order were out. His only chance was to lose himself in some gray hinterland where there were so many of his own age that no one could keep track of them all. Whether he would succeed was questionable. But until he tried, he wouldn't know, and Jimmy was desperate enough to try anything.

He attended the funeral services with Paul Brennan. But while the pastor was invoking Our Heavenly Father to accept the loving parents of orphaned James, James the son left the side of his "Uncle" Paul Brennan, who knelt in
false piety with his eyes closed.

Jimmy Holden had with him only his clothing and what was left of the wad of paper money from his father's cashbox still pinned to the inside of his shirt.

This time Jimmy did not ride in style. Burlap sacks covered him when night fell; they dirtied his clothing and the bottom of the freight car scuffed his shoes. For eighteen hours he hid in the jolting darkness, not knowing and caring less where he was going, so long as it was away!

He was hungry and thirsty by the time the train first began to slow down. It was morning--somewhere. Jimmy looked furtively out of the slit at the edge of the door to see that the train was passing through a region of cottages dusted black by smoke, through areas of warehouse and factory, through squalor and filth and slum; and vacant lots where the spread of the blight area had been so fast that the outward improvement had not time to build. Eventually the scene changed to solid areas of railroad track, and the trains parked there thickened until he could no longer see the city through them.

Ultimately the train stopped long enough for Jimmy to squeeze out through the slit at the edge of the door.

The traffic was not personally terrifying, but it was so thick that Jimmy Holden wondered how people drove without colliding. He knew about traffic lights and walked with the green, staying out of trouble. He saw groups of small children playing in the streets and in the empty lots. Those not much older than himself were attending school.

He paused to watch a group of children his own age trying to play baseball with a ragged tennis ball and the handle from a broom. It was a helter-skelter game that made no pattern but provided a lot of fun and screaming. He was quite bothered by a quarrel that came up; two of his own age went at one another with tiny fists flying, using words that Jimmy hadn't learned from his father's machine.

He wondered how he might join them in their game. But they paid him no attention, so he didn't try.

At lunchtime Jimmy consumed another collection of hot dogs. He continued to meander aimlessly through the city until schooltime ended, then he saw the streets and vacant lots fill with older children playing games with more pattern to them. It was a new world he watched, a world that had not been a part of his education. The information he owned was that of the school curriculum; it held nothing of the daily business of growing up. He knew the general rules of big-league baseball, but the kid-business of stickball did not register.

He was at a complete loss. It was sheer chance and his own tremendous curiosity that led him to the edge of a small group that were busily engaged in the odd process of trying to jack up the front of a car.

It wasn't a very good jack; it should have had the weight of a full adult against the handle. The kids strained and put their weight on the jack, but the handle wouldn't budge though their feet were off the ground.

Here was the place where academic information would be useful--and the chance for an "in." Jimmy shoved himself into the small group and said, "Get a longer handle."

They turned on him suspiciously.

"Whatcha know about it?" demanded one, shoving his chin out.

"Get a longer handle," repeated Jimmy. "Go ahead, get one."

"G'wan--"

"Wait, Moe. Maybe--"

"Who's he?"

"I'm Jimmy."
"Jimmy who?"
"Jimmy--James." Academic information came up again. "Jimmy. Like the jimmy you use on a window."
"Jimmy James. Any relation to Jesse James?"
James Quincy Holden now told his first whopper. "I," he said, "am his grandson."
The one called Moe turned to one of the younger ones. "Get a longer handle," he said.
While the younger one went for something to use as a longer handle, Moe invited Jimmy to sit on the curb.
"Cigarette?" invited Moe.
"I don't smoke," said Jimmy.
"Sissy?"
Adolescent-age information looking out through five-year-old eyes assayed Moe. Moe was about eight, maybe
even nine; taller than Jimmy but no heavier. He had a longer reach, which was an advantage that Jimmy did not care
to hazard. There was no sure way to establish physical superiority; Jimmy was uncertain whether any show of
intellect would be welcome.
"No," he said. "I'm no sissy. I don't like 'em."
Moe lit a cigarette and smoked with much gesturing and flickings of ashes and spitting at a spot on the
pavement. He was finished when the younger one came back with a length of water pipe that would fit over the
handle of the jack.
The car went up with ease. Then came the business of removing the hubcap and the struggle to loose the
lugbolts. Jimmy again suggested the application of the length of pipe. The wheel came off.
"C'mon, Jimmy," said Moe. "We'll cut you in."
"Sure," nodded Jimmy Holden, willing to see what came next so long as it did not have anything to do with
Paul Brennan. Moe trundled the car wheel down the street, steering it with practiced hands. A block down and a
block around that corner, a man with a three-day growth of whiskers stopped a truck with a very dirty license plate.
Moe stopped and the man jumped out of the truck long enough to heave the tire and wheel into the back.
The man gave Moe a handful of change which Moe distributed among the little gang. Then he got in the truck
beside the driver and waved for Jimmy to come along.
"What's that for?" demanded the driver.
"He's a smarty pants," said Moe. "A real good one."
"Who're you?"
"Jimmy--James."
"What'cha do, kid?"
"What?"
"Moe, what did this kid sell you?"
"You and your rusty jacks," grunted Moe. "Jimmy James here told us how to put a long hunk of pipe on the
handle."
"Jimmy James, who taught you about leverage?" demanded the driver suspiciously.
Jimmy Holden believed that he was in the presence of an educated man. "Archimedes," he said solemnly,
giving it the proper pronunciation.
The driver said to Moe, "Think he's all right?"
"He's smart enough."
"Who're your parents, kid?"
Jimmy Holden realized that this was a fine time to tell the truth, but properly diluted to taste. "My folks are
dead," he said.
"Who you staying with?"
"No one."
The driver of the truck eyed him cautiously for a moment. "You escaped from an orphan asylum?"
"Uh-huh," lied Jimmy.
"Where?"
"Ain't saying."
"Wise, huh?"
"Don't want to get sent back," said Jimmy.
"Got a flop?"
"Flop?"
"Place to sleep for the night."
"No."
"Where'd you sleep last night?"
"Boxcar."
"Bindlestiff, huh?" roared the man with laughter.
"No, sir," said Jimmy. "I've no bindle."
The man's roar of laughter stopped abruptly. "You're a pretty wise kid," he said thoughtfully.
"I told y' so," said Moe.
"Shut up," snapped the man. "Kid, do you want a flop for the night?"
"Sure."
"Okay. You're in."
"What's your name?" asked Jimmy.
"You call me Jake. Short for Jacob. Er--here's the place."
The "Place" had no other name. It was a junkyard. In it were car parts, wrecks with parts undamaged, whole motors rusting in the air, axles, wheels, differential assemblies and transmissions from a thousand cars of a thousand different parentages. Hubcaps abounded in piles sorted to size and shape. Jake drove the little pickup truck into an open shed. The tire and wheel came from the back and went immediately into place on a complicated gadget. In a couple of minutes, the tire was off the wheel and the inner tube was out of the casing. Wheel, casing, and inner tube all went into three separate storage piles.
Not only a junkyard, but a stripper's paradise. Bring a hot car in here and in a few hours no one could find it. Its separated parts would be sold piece by piece and week by week as second-hand replacements.
Jake said, "Dollar-fifty."
"Two," said Moe.
"One seventy-five."
"Two."
"Go find it and put it back."
"Gimme the buck-six," grunted Moe. "Pretty cheap for a good shoe, a wheel, and a sausage."
"Bring it in alone next time, and I'll slip you two-fifty. That gang you use costs, too. Now scram, Jimmy James and I got business to talk over."
"He taking over?"
"Don't talk stupid. I need a spotter. You're too old, Moe. And if he's any good, you gotta promotion coming."
"And if he ain't?"
"Don't come back!"
Moe eyed Jimmy Holden. "Make it good--Jimmy. There was malice in Moe's face.
Jake looked down at Jimmy Holden. With precisely the same experienced technique he used to estimate the value of a car loaded with road dirt, rust, and collision-smashed fenders, Jake stripped the child of the dirty clothing, the scuffed shoes, the mussed hair, and saw through to the value beneath. Its price was one thousand dollars, offered with no questions asked for information that would lead to the return of one James Quincy Holden to his legal guardian.
It wasn't magic on Jake's part. Paul Brennan had instantly offered a reward. And Jake made it his business to keep aware of such matters.
How soon, wondered Jake, might the ante be raised to two Gee? Five? And in the meantime, if things panned, Jimmy could be useful as a spotter.
"You afraid of that Moe punk, Jimmy?"
"No sir."
"Good, but keep an eye on him. He'd sell his mother for fifty cents clear profit--seventy-five if he had to split the deal. Now, kid, do you know anything about spotting?"
"No sir."
"Hungry?"
"Yes sir."
"All right. Come on in and we'll eat. Do you like Mulligan?"
"Yes sir."
"Good. You and me are going to get along."
Inside of the squalid shack, Jake had a cozy set-up. The filth that he encouraged out in the junkyard was not tolerated inside his shack. The dividing line was halfway across the edge of the door; the inside was as clean, neat, and shining as the outside was squalid.
"You'll sleep here," said Jake, waving towards a small bedroom with a single twin bunk. "You'll make yer own bed and take a shower every night--or out! Understand?"
"Yes sir."
“Good. Now, let's have chow, and I'll tell you about this spotting business. You help me, and I'll help you. One blab and back you go to where you came from. Get it?”

“Yes sir.”

And so, while the police of a dozen cities were scouring their beats for a homeless, frightened five-year-old, Jimmy Holden slept in a comfortable bed in a clean room, absolutely disguised by an exterior that looked like an abandoned manure shed.

CHAPTER FOUR

Jimmy discovered that he was admirably suited to the business of spotting. The "job turnover" was high because the spotter must be young enough to be allowed the freedom of the preschool age, yet be mature enough to follow orders.

The job consisted of meandering through the streets of the city, in the aimless patterns of youth, while keeping an eye open for parked automobiles with the ignition keys still in their locks.

He takes little risk. He merely spots the target. He reports that there is such-and-such a car parked so-and-so, after which he goes on to spot the next target. The rest of the business is up to the men who do the actual stealing.

He felt about the same with Jimmy Holden; the "missing person" report stated that one of the most prominent factors in the lad's positive identification was his high quality of speech and his superior intelligence. (This far Paul Brennan had to go, and he had divulged the information with great reluctance.)

But though Jake needed a preschool child with intelligence, he did not realize the height of Jimmy Holden's.

It was obvious to Jimmy on the second day that Jake's crew was not taking advantage of every car spotted. One of them had been a "natural" to Jimmy's way of thinking. He asked Jake about it: "Why didn't you take the sea-green Ford in front of the corner store?"

"Too risky."

"Risky?"

Jake nodded. "Spotting isn't risky, Jimmy. But picking the car up is. There is a very dangerous time when the driver is a sitting duck. From the moment he opens the car door he is in danger. Sitting in the chance of getting caught, he must start the car, move it out of the parking space into traffic, and get under way and gone before he is safe."

"But the sea-green Ford was sitting there with its engine running!"

"Meaning," nodded Jake, "that the driver pulled in and made a fast dash into the store for a newspaper or a pack of cigarettes."

"I understand. Your man could get caught. Or," added Jimmy thoughtfully, "the owner might even take his car away before we got there."

Jake nodded. This one was going to make it easy for him.

As the days wore on, Jimmy became more selective. He saw no point in reporting a car that wasn't going to be used. An easy mark wedged between two other cars couldn't be removed with ease. A car parked in front of a parking meter with a red flag was dangerous, it meant that the time was up and the driver should be getting nervous about it. A man who came shopping along the street to find a meter with some time left by the former driver was obviously looking for a quick-stop place--whereas the man who fed the meter to its limit was a much better bet.

Jake, thankful for what Fate had brought him, now added refinements of education. Cars parked in front of supermarkets weren't safe; the owner might be standing just inside the big plate glass window. The car parked hurriedly just before the opening of business was likely to be a good bet because people are careless about details when they are hurrying to punch the old time clock.

Jake even closed down his operations during the calculated danger periods, but he made sure to tell Jimmy Holden why.

From school-closing to dinnertime Jimmy was allowed to do as he pleased. He found it hard to enjoy playing with his contemporaries, and Jake's explanation about dangerous times warned Jimmy against joining Moe and his little crew of thieves. Jimmy would have enjoyed helping in the stripping yard, but he had not the heft for it. They gave him little messy jobs to do that grimed his hands and made Jake's stern rule of cleanliness hard to achieve. Jimmy found it easier to avoid such jobs than to scrub his skin raw.
One activity he found to his ability was the cooking business.

Jake was a stew-man, a soup-man, a slum-gullion man. The fellows who roamed in and out of Jake's Place dipped their plate of slum from the pot and their chunk of bread from the loaf and talked all through this never-started and never-ended lunch. With the delicacy of his "inside" life, Jake knew the value of herbs and spices and he was a hard taskmaster. But inevitably, Jimmy learned the routine of brewing a bucket of slum that suited Jake's taste, after which Jimmy was now and then permitted to take on the more demanding job of cooking the steaks and chops that made their final evening meal.

Jimmy applied himself well, for the knowledge was going to be handy. More important, it kept him from the jobs that grimed his hands.

He sought other pursuits, but Jake had never had a resident spotter before and the play-facilities provided were few. Jimmy took to reading--necessarily, the books that Jake read, that is, approximately equal parts of science fiction and girlie-girlie books. The science fiction he enjoyed; but he was not able to understand why he wasn't interested in the girlie books. So Jimmy read. Jake even went out of his way to find more science fiction for the lad.

Ultimately, Jimmy located a potential source of pleasure.

He spotted a car with a portable typewriter on the back seat. The car was locked and therefore no target, but it stirred his fancy. Thereafter he added a contingent requirement to his spotting. A car with a typewriter was more desirable than one without.

Jimmy went on to further astound Jake by making a list of what the customers were buying. After that he concentrated on spotting those cars that would provide the fastest sale for their parts.

It was only a matter of time; Jimmy spotted a car with a portable typewriter. It was not as safe a take as his others, but he reported it. Jake's driver picked it up and got it out in a squeak; the car itself turned up to be no great find.

Jimmy claimed the typewriter at once.

Jake objected: "No dice, Jimmy."
"I want it, Jake."
"Look, kid, I can sell it for twenty."
"But I want it."

Jake eyed Jimmy thoughtfully, and he saw two things. One was a thousand-dollar reward standing before him. The other was a row of prison bars.

Jake could only collect one and avoid the other by being very sure that Jimmy Holden remained grateful to Jake for Jake's shelter and protection.

He laughed roughly. "All right, Jimmy," he said. "You lift it and you can have it."

Jimmy struggled with the typewriter, and succeeded only because it was a new one made of the titanium-magnesium-aluminum alloys. It hung between his little knees, almost--but not quite--touching the ground.

"You have it," said Jake. He lifted it lightly and carried it into the boy's little bedroom.

Jimmy started after dinner. He picked out the letters with the same painful search he'd used in typing his getaway letter. He made the same mistakes he'd made before. It had taken him almost an hour and nearly fifty sheets of paper to compose that first note without an error; that was no way to run a railroad; now Jimmy was determined to learn the proper operation of this machine. But finally the jagged tack-tack--pause--tack-tack got on Jake's nerves.

Jake came in angrily. "You're wasting paper," he snapped. He eyed Jimmy thoughtfully. "How come with your education you don't know how to type?"
"My father wouldn't let me."
"Seems your father wouldn't let you do anything."

"He said that I couldn't learn until I was old enough to learn properly. He said I must not get into the habit of using the hunt-and-peck system, or I'd never get out of it."
"So what are you doing now?"
"My father is dead."
"And anything he said before doesn't count any more?"

"He promised me that he'd start teaching me as soon as my hands were big enough," said Jimmy soberly. "But he isn't here any more. So I've got to learn my own way."

Jake reflected. Jimmy was a superior spotter. He was also a potential danger; the other kids played it as a game and didn't really realize what they were doing. This one knew precisely what he was doing, knew that it was wrong, and had the lucidity of speech to explain in full detail. It was a good idea to keep him content.

"If you'll stop that tap-tapping for tonight," promised Jake, "I'll get you a book tomorrow. Is it a deal?"
"You will?"
"I will if you'll follow it."
"Sure thing."
"And," said Jake, pushing his advantage, "you'll do it with the door closed so's I can hear this TV set."
"Yes sir."
Jake kept his word.

On the following afternoon, not only was Jimmy presented with one of the standard learn-it-yourself books on touch-typing, but Jake also contrived a sturdy desk out of one old packing case and a miniature chair out of another. Both articles of home-brewed furniture Jake insisted upon having painted before he permitted them inside his odd dwelling, and that delayed Jimmy one more day.

But it was only one more day; and then a new era of experience began for Jimmy.

It would be nice to report that he went at it with determination, self-discipline, and system, following instructions to the letter and emerging a first-rate typist.

Sorry. Jimmy hated every minute of it. He galled at the pages and pages of juj juj juj frf frf frf. He cried with frustration because he could not perform the simple exercise to perfection. He skipped through the book so close to complete failure that he hurled it across the room, and cried in anger because he had not the strength to throw the typewriter after it. Throw the machine? He had not the strength in his pinky to press the carriage-shift key!

Part of his difficulty was the size of his hands, of course. But most of his trouble lay deep-seated in his recollection of his parents' fabulous machine. It would have made a typist of him in a single half-hour session, or so he thought.

He had yet to learn about the vast gulf that lies between theory and practice.

It took Jimmy several weeks of aimless fiddling before he realized that there was no easy short-cut. Then he went back to the juj juj juj frf frf frf routine and hated it just as much, but went on.

He invented a kind of home-study "hooky" to break the monotony. He would run off a couple of pages of regular exercise, and then turn back to the hunt-and-peck system of typing to work on a story. He took a furtive glee in this; he felt that he was getting away with something. In mid-July, Jake caught him at it.

"What's going on?" demanded Jake, waving the pages of manuscript copy.
"Typing," said Jimmy.
Jake picked up the typing guidebook and waved it under Jimmy's nose. "Show me where it says you gotta type anything like, 'Captain Brandon struggled against his chains when he heard Lady Hamilton scream. The pirate's evil laugh rang through the ship. 'Curse you--'""
Jake snorted.
"But--" said Jimmy faintly.
"But nothing!" snapped Jake. "Stop the drivel and learn that thing! You think I let you keep the machine just to play games? We gotta find a way to make it pay off. Learn it good!"
He stamped out, taking the manuscript with him. From that moment on, Jimmy's furtive career as an author went on only when Jake was either out for the evening or entertaining. In any case, he did not bother Jimmy further, evidently content to wait until Jimmy had "learned it good" before putting this new accomplishment to use. Nor did Jimmy bother him. It was a satisfactory arrangement for the time being. Jimmy hid his "work" under a pile of raw paper and completed it in late August. Then, with the brash assurance of youth, he packed and mailed his first finished manuscript to the editor of Boy's Magazine.

His typing progressed more satisfactorily than he realized, even though he was still running off page after page of repetitious exercise, leavened now and then by a page of idiotic sentences the letters of which were restricted to the center of the typewriter keyboard. The practice, even the hunt-and-peck relaxation from discipline, exercised the small muscles. Increased strength brought increased accuracy.

September rolled in, the streets emptied of school-aged children and the out-of-state car licenses diminished to a trickle. With the end of the carefree vacation days went the careless motorist.

Jake, whose motives were no more altruistic than his intentions were legal, began to look for a means of disposing of Jimmy Holden at the greatest profit to himself. Jake stalled only because he hoped that the reward might be stepped up.

But it was Jimmy's own operations that closed this chapter of his life.

CHAPTER FIVE
Jimmy had less scout work to do and no school to attend; he was too small to help in the sorting of car parts and too valuable to be tossed out. He was in the way.
So he was in Jake's office when the mail came. He brought the bundle to Jake's desk and sat on a box, sorting the circulars and catalogs from the first class. Halfway down the pile was a long envelope addressed to Jimmy James.
He dropped the rest with a little yelp. Jake eyed him quickly and snatched the letter out of Jimmy's hands.
"Hey! That's mine!" said Jimmy. Jake shoved him away.

"Who's writing you?" demanded Jake.

"It's mine!" cried Jimmy.

"Shut up!" snapped Jake, unfolding the letter. "I read all the mail that comes here first."

"But--"

"Shut your mouth and your teeth'll stay in," said Jake flatly. He separated a green slip from the letter and held the two covered while he read. "Well, well," he said. "Our little Shakespeare!" With a disdainful grunt Jake tossed the letter to Jimmy.

Eagerly, Jimmy took the letter and read:

Dear Mr. James:

We regret the unconscionable length of time between your submission and this reply. However, the fact that this reply is favorable may be its own apology. We are enclosing a check for $20.00 with the following explanation:

Our policy is to reject all work written in dialect. At the best we request the author to rewrite the piece in proper English and frame his effect by other means. Your little story is not dialect, nor is it bad literarily, the framework's being (as it is) a fairly good example of a small boy's relating in the first person one of his adventures, using for the first time his father's typewriter. But you went too far. I doubt that even a five-year-old would actually make as many typographical errors.

However, we found the idea amusing, therefore our payment. One of our editors will work your manuscript into less-erratic typescript for eventual publication.

Please continue to think of us in the future, but don't com up your script with so many studied blunders.

Sincerely, Joseph Brandon, editor, Boy's Magazine.

"Gee," breathed Jimmy, "a check!"

Jake laughed roughly. "Shakespeare," he roared. "Don't com up your stuff! You put too many errors in! Wow!"

Jimmy's eyes began to burn. He had no defense against this sarcasm. He wanted praise for having accomplished something, instead of raucous laughter.

"I wrote it," he said lamely.

"Oh, go away!" roared Jake.

Jimmy reached for the check.

"Scram," said Jake, shutting his laughter off instantly.

"It's mine!" cried Jimmy.

Jake paused, then laughed again. "Okay, smart kid. Take it and spend it!" He handed the check to Jimmy Holden.

Jimmy took it quickly and left.

He wanted to eye it happily, to gloat over it, to turn it over and over and to read it again and again; but he wanted to do it in private.

He took it with him to the nearest bank, feeling its folded bulk and running a fingernail along the serrated edge. He re-read it in the bank, then went to a teller's window. "Can you cash this, please?" he asked.

The teller turned it over. "It isn't endorsed."

"I can't reach the desk to sign it," complained Jimmy.

"Have you an account here?" asked the teller politely.

"Well, no sir."

"Any identification?"

"No--no sir," said Jimmy thoughtfully. Not a shred of anything did he have to show who he was under either name.

"Who is this Jimmy James?" asked the teller.

"Me. I am."

The teller smiled. "And you wrote a short story that sold to Boy's Magazine?" he asked with a lifted eyebrow.

"That's pretty good for a little guy like you."

"Yes sir."

The teller looked over Jimmy's head; Jimmy turned to look up at one of the bank's policemen. "Tom, what do you make of this?"

The policeman shrugged. He stooped down to Jimmy's level. "Where did you get this check, young fellow?" he asked gently.

"It came in the mail this morning."

"You're Jimmy James?"

"Yes sir." Jimmy Holden had been called that for more than half a year; his assent was automatic.
"How old are you, young man?" asked the policeman kindly.
"Five and a half."
"Isn't that a bit young to be writing stories?"
Jimmy bit his lip. "I wrote it, though."
The policeman looked up at the teller with a wink. "He can tell a good yarn," chuckled the policeman.
"Shouldn't wonder if he could write one."
The teller laughed and Jimmy's eyes burned again. "It's mine," he insisted.
"If it's yours," said the policeman quietly, "we can settle it fast enough. Do your folks have an account here?"
"No sir."
"Hmmm. That makes it tough."
Brightly, Jimmy asked, "Can I open an account here?"
"Why, sure you can," said the policeman. "All you have to do is to bring your parents in."
"But I want the money," wailed Jimmy.
"Jimmy James," explained the policeman with a slight frown to the teller, "we can't cash a check without positive identification. Do you know what positive identification means?"
"Yes sir. It means that you've got to be sure that this is me."
"Right! Now, those are the rules. Now, of course, you don't look like the sort of young man who would tell a lie. I'll even bet your real name is Jimmy James, Jr. But you see, we have no proof, and our boss will be awfully mad at us if we break the rules and cash this check without following the rules. The rules, Jimmy James, aren't to delay nice, honest people, but to stop people from making mistakes. Mistakes such as taking a little letter out of their father's mailbox. If we cashed that check, then it couldn't be put back in father's mailbox without anybody knowing about it. And that would be real bad."
"But it's mine!"
"Sonny, if that's yours, all you have to do is to have your folks come in and say so. Then we'll open an account for you."
"Yes sir," said Jimmy in a voice that was thick with tears of frustration close to the surface. He turned away and left.

Jake was still in the outside office of the Yard when Jimmy returned. The boy was crestfallen, frustrated, unhappy, and would not have returned at all if there had been another place where he was welcome. He expected ridicule from Jake, but Jake smiled.
"No luck, kid?"
Jimmy just shook his head.
"Checks are tough, Jimmy. Give up, now?"
"No!"
"No? What then?"
"I can write a letter and sign it," said Jimmy, explaining how he had outfoxed the ticket seller.
"Won't work with checks, Jimmy. For me now, if I was to be polite and dressed right they might cash a twenty if I showed up with my social security card, driver's license, identification card with photograph sealed in, and all that junk. But a kid hasn't got a chance. Look, Jimmy, I'm sorry for this morning. To-morrow morning we'll go over to my bank and I'll have them cash it for you. It's yours. You earned it and you keep it. Okay? Are we friends again?"
"Yes sir."
Gravely they shook hands. "Watch the place, kid," said Jake. "I got to make a phone call."

In the morning, Jake dressed for business and insisted that Jimmy put on his best to make a good impression. After breakfast, they set out. Jake parked in front of a granite building.
"This isn't any bank," objected Jimmy. "This is a police station."
"Sure," responded Jake. "Here's where we get you an identification card. Don't you know?"
"Okay," said Jimmy dubiously.

Inside the station there were a number of men in uniform and in plain clothing. Jake strode forward, holding Jimmy by one small hand. They approached the sergeant's desk and Jake lifted Jimmy up and seated him on one edge of the desk with his feet dangling.
The sergeant looked at them with interest but without surprise.
"Sergeant," said Jake, "this is Jimmy James--as he calls himself when he's writing stories. Otherwise he is James Quincy Holden."
Jimmy went cold all over.

Jake backed through the circle that was closing in; the hole he made was filled by Paul Brennan.
It was not the first betrayal in Jimmy James's young life, but it was totally unexpected. He didn't know that the policeman from the bank had worried Jake; he didn't know that Jake had known all along who he was; he didn't know how fast Brennan had moved after the phone call from Jake. But his young mind leaped past the unknown facts to reach a certain, and correct, conclusion.

He had been sold out.

"Jimmy, Jimmy," came the old, pleading voice. "Why did you run away? Where have you been?"

Brennan stepped forward and placed a hand on the boy's shoulder. "Without a shadow of doubt," he said formally, "this is James Quincy Holden. I so identify him. And with no more ado, I hand you the reward." He reached into his inside pocket and drew out an envelope, handing it to Jake. "I have never parted with one thousand dollars so happily in my life."

Jimmy watched, unable to move. Brennan was busy and cheerful, the model of the man whose long-lost ward has been returned to him.

"So, James, shall we go quietly or shall we have a scene?"

Trapped and sullen, Jimmy Holden said nothing. The officers helped him down from the desk. He did not move. Brennan took him by a hand that was as limp as wet cloth. Brennan started for the door. The arm lifted until the link was taut; then, with slow, dragging steps, James Quincy Holden started toward home.

Brennan said, "You understand me, don't you, Jimmy?"

"You want my father's machine."

"Only to help you, Jimmy. Can't you believe that?"

"No."

Brennan drove his car with ease. A soft smile lurked around his lips. He went on, "You know what your father's machine will do for you, don't you, Jimmy?"

"Yes."

"But have you ever attended school?"

"No." But Jimmy remembered the long hours and hours of study and practice before he became proficient with his typewriter. For a moment he felt close to tears. It had been the only possession he truly owned, now it was gone. And with it was gone the author's first check. The thrill of that first check is far greater than Graduation or the First Job. It is approximately equal to the flush of pride that comes when the author's story hits print with his NAME appended.

But Brennan's voice cut into his thoughts. "You will attend school, Jimmy. You'll have to."

"But--"

"Oh, now look, Jimmy. There are laws that say you must attend school. The only way those laws can be avoided is to make an appeal to the law itself, and have your legal guardian--myself--ask for the privilege of tutoring you at home. Well, I won't do it."

He drove for a moment, thinking. "So you're going to attend school," he said, "and while you're there you're going to be careful not to disclose by any act or inference that you already know everything they can teach you. Otherwise they will ask some embarrassing questions. And the first thing that happens to you is that you will be put in a much harder place to escape from than our home, Jimmy. Do you understand?"

"Yes sir," the boy said sickly.

"But," purred Uncle Paul Brennan, "you may find school very boring. If so, you have only to say the word--rebuild your father's machine--and go on with your career."

"I w--" Jimmy began automatically, but his uncle stopped him.

"You won't, no," he agreed. "Not now. In the meantime, then, you will live the life proper to your station--and your age. I won't deny you a single thing, Jimmy. Not a single thing that a five-year-old can want."

CHAPTER SIX

Paul Brennan moved into the Holden house with Jimmy.

Jimmy had the run of the house--almost. Uncle Paul closed off the upper sitting room, which the late parents had converted into their laboratory. That was locked. But the rest of the house was free, and Jimmy was once more among the things he had never hoped to see again.

Brennan's next step was to hire a middle-aged couple to take care of house and boy. Their name was Mitchell; they were childless and regretted it; they lavished on Jimmy the special love and care that comes only from childless child-lovers.

Though Jimmy was wary to the point of paranoia, he discovered that he wanted for nothing. He was kept clean and his home kept tidy. He was fed well--not only in terms of nourishment, but in terms of what he liked.
Then... Jimmy began to notice changes.

Huckleberry Finn turned up missing. In its place on the shelf was a collection of Little Golden Books.

His advanced Mecanno set was "broken"—so Mrs. Mitchell told him. Uncle Paul had accidentally crushed it.

"But you'll like this better," she beamed, handing him a fresh new box from the toy store. It contained bright-colored modular blocks.

Jimmy's parents had given him canvasboard and oil paints; now they were gone. Jimmy would have admitted he was no artist; but he didn't enjoy retrogressing to his uncle's selection—finger paints.

His supply of drawing paper was not tampered with. But it was not replaced. When it was gone, Jimmy was presented with a blackboard and boxes of colored chalk.

By Christmas every possession was gone—replaced—the new toys tailored to Jimmy's physical age. There was a Christmas tree, and under it a pile of gay bright boxes. Jimmy had hardly the heart to open them, for he knew what they would contain.

He was right.

Jimmy had everything that would keep a five-year-old boy contented ... and not one iota more. He objected; his objections got him nowhere. Mrs. Mitchell was reproachful: Ingratitude, Jimmy! Mr. Mitchell was scornful: Maybe James would like to vote and smoke a pipe?

And Paul Brennan was very clear. There was a way out of this, yes. Jimmy could have whatever he liked.

There was just this one step that must be taken first; the machine must be put back together again.

When it came time for Jimmy to start school he was absolutely delighted; nothing, nothing could be worse than this.

At first it was a novel experience.

He sat at a desk along with forty-seven other children of his size, neatly stacked in six aisles with eight desks to the tier. He did his best to copy their manners and to reproduce their halting speech and imperfect grammar. For the first couple of weeks he was not noticed.

The teacher, with forty-eight young new minds to study, gave him his 2.08% of her total time and attention. Jimmy Holden was not a deportment problem; his answers to the few questions she directed at him were correct. Therefore he needed less attention and got less; she spent her time on the loud, the unruly and those who lagged behind in education.

Because his total acquaintance with children of his own age had been among the slum kids that hung around Jake Caslow's Place, Jimmy found his new companions an interesting bunch.

He watched them, and he listened to them. He copied them and in two weeks Jimmy found them pitifully lacking and hopelessly misinformed. They could not remember at noon what they had been told at ten o'clock. They had difficulty in reading the simple pages of the First Reader.

But he swallowed his pride and stumbled on and on, mimicking his friends and remaining generally unnoticed.

If written examinations were the rule in the First Grade, Jimmy would have been discovered on the first one. But with less than that 2% of the teacher's time directed at him, Jimmy's run of correct answers did not attract notice. His boredom and his lack of attention during daydreams made him seem quite normal.

He began to keep score on his classmates on the fly-leaf of one of his books. Jimmy was a far harsher judge than the teacher. He marked them either wrong or right; he gave no credit for trying, or for their stumbling efforts to express their muddled ideas and incomplete grasp. He found their games fun at first, but quickly grew bored. When he tried to introduce a note of strategy they ignored him because they did not understand. They made rules as they went along and changed them as they saw fit. Then, instead of complying with their own rules, they pouted-up and sulked when they couldn't do as they wanted.

But in the end it was Jimmy's lack of experience in acting that tripped him.

Having kept score on his playmates' answers, Jimmy knew that some fairly high percentage of answers must inevitably be wrong. So he embarked upon a program of supplying a certain proportion of errors. He discovered that supplying a wrong answer that was consistent with the age of his contemporaries took too much of his intellect to keep his actions straight. He forgot to employ halting speech and childlike grammar. His errors were delivered in faultless grammar and excellent self-expression; his correct answers came out in the English of his companions; mispronounced, ill-composed, and badly delivered.

The contrast was enough to attract even 2.08% of a teacher.

During the third week of school, Jimmy was day-dreaming during class. Abruptly his teacher snapped, "James Holden, how much is seven times nine?"

"Sixty-three," replied Jimmy, completely automatic.

"James," she said softly, "do you know the rest of your numbers?"

Jimmy looked around like a trapped animal. His teacher waited him out until Jimmy, finding no escape, said,
"Yes'm."
"Well," she said with a bright smile. "It's nice to know that you do. Can you do the multiplication table?"
"Yes'm."
"Are you sure?"
"Yes'm."
"Let's hear you."

Jimmy looked around. "No, Jimmy," said his teacher. "I want you to say it. Go ahead." And then as Jimmy hesitated still, she addressed the class. "This is important," she said. "Someday you will have to learn it, too. You will use it all through life and the earlier you learn it the better off you all will be. Knowledge," she quoted proudly, "is power! Now, Jimmy!"

Jimmy began with two-times-two and worked his way through the long table to the twelves. When he finished, his teacher appointed one of the better-behaved children to watch the class. "Jimmy," she said, "I'm going to see if we can't put you up in the next grade. You don't belong here. Come along."

They went to the principal's office. "Mr. Whitworth," said Jimmy's teacher, "I have a young genius in my class."
"A young genius, Miss Tilden?"
"Yes, indeed. He already knows the multiplication table."
"You do, James? Where did you learn it?"
"My father taught me."

Principal and teacher looked at each another. They said nothing but they were both recalling stories and rumors about the brilliance of his parents. The accident and death had not escaped notice.
"What else did they teach you, James?" asked Mr. Whitworth. "To read and write, of course?"
"Yes sir."
"History?"

Jimmy squirmed inwardly. He did not know how much to admit. "Some," he said noncommittally.
"When did Columbus discover America?"
"In Fourteen Ninety-Two."

"Fine," said Mr. Whitworth with a broad smile. He looked at Miss Tilden. "You're right. Young James should be advanced." He looked down at Jimmy Holden. "James," he said, "we're going to place you in the Second Grade for a tryout. Unless we're wrong, you'll stay and go up with them."

Jimmy's entry into Second Grade brought a different attitude. He had entered school quietly just for the sake of getting away from Paul Brennan. Now he was beginning to form a plan. If he could go from First to Second in a matter of three weeks, then, by carefully disclosing his store of knowledge bit-by-bit at the proper moment, he might be able to go through school in a short time. Moreover, he had tasted the first fruits of recognition. He craved more.

Somewhere was born the quaint notion that getting through school would automatically make him an adult, with all attendant privileges.

So Jimmy Holden dropped all pretense. His answers were as right as he could make them. He dropped the covering mimicry of childish speech and took personal pride in using grammar as good as that of his teacher.

This got him nothing. The Second Grade teacher was of the "progressive" school; she firmly believed that everybody, having been created equal, had to stay that way. She pointedly avoided giving Jimmy any opportunity to show his capability.

He bided his time with little grace.

He found his opportunity during the visit of a school superintendent. During this session Jimmy hooted when one of his fellows said that Columbus proved the world was round.

Angrily she demanded that Jimmy tell her who did prove it, and Jimmy Holden replied that he didn't know whether it was Pythagoras or one of his followers, but he did know that it was one of the few things that Aristotle ever got right. This touched her on a sore spot. She admired Aristotle and couldn't bear to hear the great man accused of error.

She started baiting Jimmy with loaded questions and stopped when Jimmy stated that Napoleon Bonaparte was responsible for the invention of canned food, the adoption of the metric system, and the development of the semaphore telegraph. This stopped all proceedings until Jimmy himself found the references in the Britannica. That little feat of research-reference impressed the visiting superintendent. Jimmy Holden was jumped into Third Grade.

Convinced that he was on the right trolley, Jimmy proceeded to plunge in with both feet. Third Grade Teacher helped. Within a week he was being called upon to aid the laggards. He stood out like a lighthouse; he was the one who could supply the right answers when the class was stumped. His teacher soon began to take a delight in belaboring the class for a minute before turning to Jimmy for the answer. Heaven forgive him, Jimmy enjoyed it. He
began to hold back slyly, like a comedian building up the tension before a punch-line.

His classmates began to call him "old know-it-all." Jimmy did not realize that it was their resentment speaking. He accepted it as deference to his superior knowledge. The fact that he was not a part of their playtime life did not bother him one iota. He knew very well that his size alone would cut him out of the rough and heavy games of his classmates; he did not know that he was cut out of their games because they disliked him.

As time wore on, some of the rougher ones changed his nickname from "know-it-all" to "teacher's pet"; one of them used rougher language still. To this Jimmy replied in terms he'd learned from Jake Caslow's gutters. All that saved him from a beating was his size; even the ones who disliked him would not stand for the bully's beating up a smaller child.

But in other ways they picked on him. Jimmy reasoned out his own relationship between intelligence and violence. He had yet to learn the psychology of vandalism—but he was experiencing it.

Finding no enjoyment out of play periods, Jimmy took to staying in. The permissive school encouraged it; if Jimmy Holden preferred to tinker with a typewriter instead of playing noisy games, his teacher saw no wrong in it—for his Third Grade teacher was something of an intellectual herself.

In April, one week after his sixth birthday, Jimmy Holden was jumped again.

Jimmy entered Fourth Grade to find that his fame had gone before him; he was received with sullen glances and turned backs.

But he did not care. For his birthday, he received a typewriter from Paul Brennan. Brennan never found out that the note suggesting it from Jimmy's Third Grade teacher had been written after Jimmy's prompting.

So while other children played, Jimmy wrote.

He was not immediately successful. His first several stories were returned; but eventually he drew a winner and a check. Armed with superior knowledge, Jimmy mailed it to a bank that was strong in advertising "mail-order" banking. With his first check he opened a pay-by-the-item, no-minimum-balance checking account.

Gradually his batting average went up, but there were enough returned rejections to make Paul Brennan view Jimmy's literary effort with quiet amusement. Still, slowly and in secret, Jimmy built up his bank balance by twenties, fifties, an occasional hundred.

For above everything, by now Jimmy knew that he could not go on through school as he'd planned.

If his entry into Fourth Grade had been against scowls and resentment from his classmates, Fifth and Sixth would be more so. Eventually the day would come when he would be held back. He was already mingling with children far beyond his size. The same permissive school that graduated dolts so that their stupid personalities wouldn't be warped would keep him back by virtue of the same idiotic reasoning.

He laid his plans well. He covered his absence from school one morning and thereby gained six free hours to start going about his own business before his absence could be noticed.

This was his third escape. He prayed that it would be permanent.

BOOK TWO:
THE HERMIT
CHAPTER SEVEN

Seventy-five miles south of Chicago there is a whistle-stop called Shipmont. (No ship has ever been anywhere near it; neither has a mountain.) It lives because of a small college; the college, in turn, owes its maintenance to an installation of great interest to the Atomic Energy Commission.

Shipmont is served by two trains a day—which stop only when there is a passenger to get on or off, which isn't often. These passengers, generally speaking, are oddballs carrying attaché cases or eager young men carrying miniature slide rules.

But on this day came a woman and a little girl.

Their total visible possessions were two battered suitcases and one battered trunk. The little girl was neatly dressed, in often-washed and mended clothing; she carried a small covered basket, and there were breadcrumbs visible on the lid. She looked bewildered, shy and frightened. She was.

The mother was thirty, though there were lines of worry on her forehead and around her eyes that made her look older. She wore little makeup and her clothing had been bought for wear instead of for looks. She looked around, leaned absently down to pat the little girl and straightened as the station-master came slowly out.

"Need anything, ma'am?" He was pleasant enough. Janet Bagley appreciated that; life had not been entirely pleasant for her for some years.

"I need a taxicab, if there is one."

"There is. I run it after the train gets in for them as ain't met. You're not goin' to the college?" He pronounced it "collitch."

Janet Bagley shook her head and took a piece of paper from her bag. "Mr. Charles Maxwell, Rural Route Fifty-
three, Martin's Hill Road," she read. Her daughter began to whimper.

The station-master frowned. "Hum," he said, "that's the Herm--er, d'you know him?"

Mrs. Bagley said: "I've never met him. What kind of a man is he?"

That was the sort of question the station-master appreciated. His job was neither demanding nor exciting; an opportunity to talk was worth having. He said cheerfully, "Why, I don't rightly know, ma'am. Nobody's ever seen him."

"Nobody?"

"Nope. Nobody. Does everything by mail."

"My goodness, what's the matter with him?"

"Don't rightly know, ma'am. Story is he was once a professor and got in some kind of big explosion. Burned the hide off'n his face and scarred up his hands something turrible, so he don't want to show himself. Rented the house by mail, pays his rent by mail. Orders stuff by mail. Mostly not real U-nited States Mail, y'know, because we don't mind dropping off a note to someone in town. I'm the local mailman, too. So when I find a note to Herby Wharton, the fellow that owns the general store, I drop it off. Margie Clark over at the bank says he writes. Gets checks from New York from publishing companies." The station-master looked around as if he were looking for Soviet spies. "He's a scientist, all right. He's doin' something important and hush-hush up there. Lots and lots of boxes and packin' cases I've delivered up there from places like Central Scientific and Labortory Supply Company. Must be a smart feller. You visitin' him?"

"Well, he hired me for housekeeper. By mail." Mrs. Bagley looked puzzled and concerned.

Little Martha began to cry.

"I'll be all right," said the station-master soothingly. "You keep your eye open," he said to Mrs. Bagley. "If'n you see anything out of line, you come right back and me and the missus will give you a lift. But he's all right. Nothin' goin' on up there that I know of. Fred Riordan--he's the sheriff--has watched the place for days and days and it's always quiet. No visitors. No nothin'. Know what I think? I think he's experimentin' with something to take away the burn scars. That's what I think. Well, hop in and I'll drive you out there."

"Is it going to cost much?"

"Nothin' this trip. We'll charge it to the U-nited States Mail. Got a package goin' out. Was waitin' for something else to go along with it, but you're here and we can count that. This way to the only taxicab service in Shipmont."

The place looked deserted. It was a shabby old clapboard house; the architecture of the prosperous farmer of seventy-five years ago. The grounds were spacious but the space was filled with scrub weeds. A picket fence surrounded the weeds with uncertain security. The windows--those that could be seen, that is--were dirty enough to prevent seeing inside with clarity, and what transparency there was left was covered by curtains. The walk up the "lawn" was flagstone with crabgrass between the stones.

The station-master unshipped the small trunk and stood it just inside the fence. He parked the suitcases beside it. "Never go any farther than this," he explained. "So far's I know, you're the first person to ever head up that walk to the front door."

Mrs. Bagley rapped on the door. It opened almost instantly.

"I'm--" then Mrs. Bagley dropped her eyes to the proper level. To the lad who was standing there she said, "I'm Mrs. Bagley. Your father--a Mr. Charles Maxwell is expecting me."

"Come in," said Jimmy Holden. "Mr. Maxwell--well, he isn't my father. He sent me to let you in."

Mrs. Bagley entered and dropped her suitcases in the front hall. Martha held back behind her mother's skirt. Jimmy closed the door and locked it carefully, but left the key in the keyhole with a gesture that Mrs. Bagley could not mistake. "Please come in here and sit down," said James Holden. "Relax a moment." He turned to look at the girl. He smiled at her, but she covered behind her mother's skirt as if she wanted to bury her face but was afraid to lose sight of what was going on around her.

"What's your name?" asked James.

She retreated, hiding most of her face. Mrs. Bagley stroked her hair and said, "Now, Martha, come on. Tell the little boy your name."

Purely as a matter of personal pride, James Holden objected to the "little boy" but he kept his peace because he knew that at eight years old he was still a little boy. In a soothing way, James said, "Come on out, Martha. I'll show you some girl-type toys we've got."

The girl's head emerged slowly. "I'm Martha Bagley," she announced.

"How old are you?"

"I'm seven."

"I'm eight," stated James. "Come on."

Mrs. Bagley looked around. She saw that the dirt on the windows was all on the outside. The inside was clean.
So was the room. So were the curtains. The room needed a dusting—a most thorough dusting. It had been given a haphazard lick-and-a-promise cleanup not too long ago, but the cleanup before that had been as desultory as the last, and without a doubt the one before and the one before that had been of the same sort of half-hearted cleaning. As a woman and a housekeeper, Mrs. Bagley found the room a bit strange.

The furniture caught her eye first. A standard open bookcase, a low sofa, a very low cocktail-type table. The chair she stood beside was standard looking, so was the big easy chair opposite. Yet she felt large in the room despite its old-fashioned high ceiling. There were several low footstools in the room; ungraceful things that were obviously wooden boxes covered with padding and leatherette. The straight chair beside her had been lowered; the bottom rung between the legs was almost on the floor.

She realized why she felt big. The furniture in the room had all been cut down.

She continued to look. The strangeness continued to bother her and she realized that there were no ash trays; there was none of the usual clutter of things that a family drops in their tracks. It was a room fashioned for a small person to live in but it wasn't lived-in.

The lack of hard cleanliness did not bother her very much. There had been an effort here, and the fact that this Charles Maxwell was hiring a housekeeper was in itself a statement that the gentleman knew that he needed one. It was odd, but it wasn't ominous.

She shook her daughter gently and said, "Come on, Martha. Let's take a look at these girl-type toys."

James led them through a short hallway, turned left at the first door, and then stood aside to give them a full view of the room. It was a playroom for a girl. It was cleaner than the living room, and as—well, untouched. It had been furnished with girl-toys that some catalog "recommended as suitable for a girl of seven."

The profusion of toys overwhelmed little Martha. She stood just inside of the door with her eyes wide, glancing back and forth. She took one slow step forward, then another. Then she quickened. She moved through the room looking, then putting out a slow, hesitant hand to touch very gently. Tense, as if she were waiting for the warning not to touch, Martha finally caressed the hair of a baby doll.

Mrs. Bagley smiled. "I'll have a time prying her loose from here," she said.

James nodded his head. "Let her amuse herself for a bit," he said. "With Martha occupied, you can give your attention to a more delicate matter."

Mrs. Bagley forgot that she was addressing an eight-year-old boy. His manner and his speech bemused her. "Yes," she said. "I do want to get this settled with your mysterious Charles Maxwell. Do you expect him down, or shall I go upstairs—?"

"This may come as a shock, Mrs. Bagley, but Charles Maxwell isn't here."

"Isn't here?" she echoed, in a tone of voice that clearly indicated that she had heard the words but hadn't really grasped their full meaning. "He won't be gone long, will he?"

James watched her covertly, then said in a matter-of-fact voice, "He left you a letter."

"Letter?"

"He was called away on some urgent business."

"But—"

"Please read the letter. It explains everything."

He handed her an envelope addressed to "Mrs. Janet Bagley." She looked at it from both sides, in the womanlike process of trying to divine its contents instead of opening it. She looked at James, but James sat stolidly waiting. Mrs. Bagley was going to get no more information from him until she read that letter, and James was prepared to sit it out until she did. It placed Mrs. Bagley in the awkward position of having to decide what to do next. Then the muffled sound of little-girl crooning came from the distant room. That brought the realization that as odd as this household was, it was a home. Mrs. Bagley delayed no further. She opened the letter and read:

My Dear Mrs. Bagley:

I deeply regret that I am not there to greet you, but it was not possible. However, please understand that insofar as I am concerned, you were hired and have been drawing your salary from the date that I forwarded railroad fare and traveling expenses. Any face-to-face meeting is no more than a pleasantry, a formal introduction. It must not be considered in any way connected with the thought of a 'Final Interview' or the process of "Closing the Deal."

Please carry on as if you had been in charge long before I departed, or—considering my hermitlike habits—the way you would have carried on if I had not departed, but instead was still upstairs and hard at work with most definite orders that I was not to be disturbed for anything less important than total, personal disaster.

I can offer you a word of explanation about young James. You will find him extraordinarily competent for a youngster of eight years. Were he less competent, I might have delayed my departure long enough to pass him literally from my supervision to yours. However, James is quite capable of taking care of himself; this fact you will appreciate fully long before you and I meet face-to-face.
In the meantime, remember that our letters and the other references acquaint us with one another far better than a few short hours of personal contact.

Sincerely, Charles Maxwell

"Well!" said Mrs. Bagley. "I don't know what to say."

Jimmy smiled. "You don't have to say anything," he said.

Mrs. Bagley looked at the youngster. "I don't think I like your Mr. Maxwell," she said.

"Why not?"

"He's practically shanghaied me here. He knows very well that I couldn't possibly leave you here all alone, no matter how I disliked the situation. He's practically forced me to stay."

James suppressed a smile. He said, "Mrs. Bagley, the way the trains run in and out of Shipmont, you're stuck for an overnight stay in any case."

"You don't seem to be perturbed."

"I'm not," he said.

Mrs. Bagley looked at James carefully. His size; his physique was precisely that of the eight-year-old boy. There was nothing malformed nor out-of-proportion; yet he spoke with an adult air of confidence.

"I am," she admitted.

"Perturbed? You needn't be," he said. "You've got to remember that writers are an odd lot. They don't conform. They don't punch time-clocks. They boast of having written a novel in three weeks but they don't mention the fact that they sat around drinking beer for six months plotting it."

"Meaning what?"

"Meaning that Maxwell sees nothing wrong in attending to his own affairs and expecting you to attend to yours."

"But what shall I do?"

James smiled. "First, take a look around the house and satisfy yourself. You'll find the third floor shut off; the rooms up there are Maxwell's, and no one goes in but him. My bedroom is the big one in the front of the second floor. Pick yourself a room or a suite of rooms or move in all over the rest of the house. Build yourself a cup of tea and relax. Do as he says: Act as if you'd arrived before he took off, that you'd met and agreed verbally to do what you've already agreed to do by letter. Look at it from his point of view."

"What is his point of view?"

"He's a writer. He rented this house by mail. He banks by mail and shops by mail and makes his living by writing. Don't be surprised when he hires a housekeeper by mail and hands her the responsibility in writing. He lives by the written word."

Mrs. Bagley said, "In other words, the fact that he offered me a job in writing and I took it in writing--?"

"Writing," said James Holden soberly, "was invented for the express purpose of recording an agreement between two men in a permanent form that could be read by other men. The whole world runs on the theory that no one turns a hand until names are signed to written contracts--and here you sit, not happy because you weren't contracted-for by a personal chit-chat and a handshake."

Mrs. Bagley was taken aback slightly by this rather pointed criticism. What hurt was the fact that, generally speaking, it was true and especially the way he put it. The young man was too blunt, too out-spokenly direct. Obviously he needed someone around the place who wasn't the self-centered writer-type. And, Mrs. Bagley admitted to herself, there certainly was no evidence of evil-doing here.

No matter what, Charles Maxwell had neatly trapped her into staying by turning her own maternal responsibility against her.

"I'll get my bags," she said.

James Holden took a deep breath. He'd won this hurdle, so far so good. Now for the next!

Mrs. Bagley found life rather unhurried in the days that followed. She relaxed and tried to evaluate James Holden. To her unwarned mind, the boy was quite a puzzle.

There was no doubt about his eight years, except that he did not whoop and holler with the aimlessness of the standard eight-year-old boy. His vocabulary was far ahead of the eight-year-old and his speech was in adult grammar rather than halting. It was, she supposed, due to his constant adult company; children denied their contemporaries for playmates often take on attitudes beyond their years. Still, it was a bit on the too-superior side to please her. It was as if he were the result of over-indulgent parents who'd committed the mistake of letting the child know that their whole universe revolved about him.

Yet Maxwell's letters said that he was motherless, that he was not Maxwell's son. This indicated a probable history of broken homes and remarriages. Mrs. Bagley thought the problem over and gave it up. It was a home.

Things went on. They started warily but smoothly at first with Mrs. Bagley asking almost incessantly whether...
Mr. Maxwell would approve of this or that and should she do this or the other and, phrased cleverly, indicated that she would take the word of young James for the time being but there would be evil sputterings in the fireplace if the programs approved by young James Holden were not wholly endorsed by Mr. Charles Maxwell.

At the end of the first week, supplies were beginning to run short and still there was no sign of any return of the missing Mr. Maxwell. With some misgiving, Mrs. Bagley broached the subject of shopping to James. The youngster favored Mrs. Bagley with another smile.

"Yes," he said calmly. "Just a minute." And he disappeared upstairs to fetch another envelope. Inside was a second letter which read:

My Dear Mrs. Bagley:

Attached you will find letters addressed to several of the local merchants in Shipmont, explaining your status as my housekeeper and directing them to honor your purchases against my accounts. Believe me, they recognize my signature despite the fact that they might not recognize me! There should be no difficulty. I'd suggest, however, that you start a savings account at the local bank with the enclosed salary check. You have no idea how much weight the local banker carries in his character-reference of folks with a savings account.

Otherwise, I trust things are pleasant.

Sincerely, Charles Maxwell.

"Things," she mused aloud, "are pleasant enough."

James nodded. "Good," he said. "You're satisfied, then?"

Mrs. Bagley smiled at him wistfully. "As they go," she said, "I'm satisfied. Lord knows, you're no great bother, James, and I'll be most happy to tell Mr. Maxwell so when he returns."

James nodded. "You're not concerned over Maxwell, are you?"

She sobered. "Yes," she said in a whisper. "Yes, I am. I'm afraid that he'll change things, that he'll not approve of Martha, or the way dinner is made, or my habits in dishwashing or bedmaking or marketing or something that will--well, put me right in the role of a paid chambermaid, a servant, a menial with no more to say about the running of the house, once he returns."

James Holden hesitated, thought, then smiled.

"Mrs. Bagley," he said apologetically, "I've thrown you a lot of curves. I hope you won't mind one more."

"You see, Mrs. Bagley," he said earnestly, "there isn't any Charles Maxwell."

Janet Bagley, with the look of a stricken animal, sat down heavily. There were two thoughts suddenly in her mind: Now I've got to leave, and, But I can't leave.

She sat looking at the boy, trying to make sense of what he had said. Mrs. Bagley was a young woman, but she had lived a demanding and unrelenting life; her husband dead, her finances calamitous, a baby to feed and raise ... there had been enough trouble in her life and she sought no more.

But she was also a woman of some strength of character. Janet Bagley had not been able to afford much joy, but when things were at their worst she had not wept. She had been calm. She had taken what inexpensive pleasures she could secure--the health of her daughter, the strength of her arms to earn a living, the cunning of her mind to make a dollar do the work of five. She had learned that there was no bargain that was not worth investigating; the shoddiest goods were worth owning at a price; the least attractive prospect had to be faced and understood, for any commodity becomes a bargain when the price is right.

There was no room for laziness or indulgence in her life. There was also no room for panic.

So Janet Bagley thought for a moment, and then said: "Tell me what you're talking about, James."

James Holden said immediately: "I am Charles Maxwell. That is, 'Charles Maxwell' is a pen name. He has no other existence."

"But--"

"But it's true, Mrs. Bagley," the boy said earnestly. "I'm only eight years old, but I happen to be earning my own living--as a writer, under the name of, among others, Charles Maxwell. Perhaps you've looked up some of the 'Charles Maxwell' books? If so, you may have seen some of the book reviews that were quoted on the jackets--I remember one that said that Charles Maxwell writes as though he himself were a boy, with the education of an adult. Well, that's the fact of the case."

Mrs. Bagley said slowly, "But I did look Mr. Max--I mean, I did look you up. There was a complete biographical sketch in Woman's Life. Thirty-one years old, I remember."

"I know. I wrote it. It too was fiction."

"You wrote--but why?"
"Because I was asked to write it," said James.
"But, well--what I mean, is--Just who is Mr. Maxwell? The man at the station said something about a hermit, but--"

"The Hermit of Martin's Hill is a convenient character carefully prepared to explain what might have looked like a very odd household," said James Holden. "Charles Maxwell, the Hermit, does not exist except in the minds of the neighbors and the editors of several magazines, and of course, the readers of those pages."
"But he wrote me himself." The bewildered woman paused.
"That's right, Mrs. Bagley. There's absolutely nothing illegal about a writer's using a pen name. Absolutely nothing. Some writers become so well-known by their pseudonym that they answer when someone calls them. So long as the writer isn't wanted by the F.B.I. for some heinous crime, and so long as he can unscramble the gobbledygook on Form 1040, stay out of trouble, pay his rent, and make his regular contributions to Social Security, nobody cares what name he uses."

"But where are your parents? Have you no friends? No legal guardian? Who handles your business affairs?"

James said in a flat tone of recital, "My parents are dead. What friends and family I have, want to turn me over to my legal guardian. My legal guardian is the murderer of my parents and the would-have-been murderer of me if I hadn't been lucky. Someday I shall prove it. And I handle my affairs myself, by mail, as you well know. I placed the advertisement, wrote the letters of reply, wrote those letters that answered specific questions and asked others, and I wrote the check that you cashed in order to buy your railroad ticket, Mrs. Bagley. No, don't worry. It's good."

Mrs. Bagley tried to digest all that and failed. She returned to the central point. "But you're a minor--"

"I am," admitted James Holden. "But you accepted my checks, your bank accepted my checks, and they've been honored by the clearing houses. My own bank has been accepting them for a couple of years now. It will continue to be that way until something goes wrong and I'm found out. I'm taking every precaution that nothing goes wrong."

"Still--"

"Mrs. Bagley, look at me. I am precisely what I seem to be. I am a young male human being, eight years old, possessed of a good command of the English language and an education superior to the schooling of any high-school graduate. It is true that I am an infant in the eyes of the law, so I have not the right to hold the ear of the law long enough to explain my competence."

"But--"

"Listen a moment," insisted James. "You can't hope to hear it all in one short afternoon. It may take weeks before you fully understand."

"You assume that I'll stay, then?"

James smiled. Not the wide open, simple smile of youth but the knowing smile of someone pleased with the success of his own plans. "Mrs. Bagley, of the many replies to my advertisement, yours was selected because you are in a near-desperate position. My advertisement must have sounded tailor-made to fit your case; a young widow to work as resident housekeeper, child of preschool or early school age welcome. Well, Mrs. Bagley, your qualifications are tailor-made for me, too. You are in need, and I can give you what you need--a living salary, a home for you and your daughter, and for your daughter an education that will far transcend any that you could ever provide for her."

"And how do you intend to make that come to pass?"

"Mrs. Bagley, at the present time there are only two people alive who know the answer to that question. I am one of them. The other is my so-called legal 'guardian' who would be most happy to guard me right out of my real secret. You will be the third person alive to know that my mother and father built a machine that produces the same deeply-inlaid memory-track of information as many months of learning-by-repetition. With that machine, I absorbed the information available to a high-school student before I was five. I am rebuilding that machine now from plans and specifications drilled into my brain by my father. When it is complete, I intend to become the best informed person in the world."

"That isn't right," breathed Mrs. Bagley.
"Isn't it?" asked James seriously. "Isn't it right? Is it wrong, when at the present time it takes a man until he is almost thirty years old before he can say that his education is complete?"

"Well, I suppose you're right."

James eyed Mrs. Bagley carefully. He said softly, "Mrs. Bagley, tell me, would you give Martha a college education if you had--or will you if you have at the time--the wherewithal to provide it?"

"Of course."

"You have it here," said James. "So long as you stay to protect it."

"But won't it make--?" her voice trailed away uncertainly.

"A little intellectual monster out of her?" laughed the boy. "Maybe. Maybe I am, too. On the other hand it
might make a brilliant woman out of her. She might be a doctor if she has the capacity of a brilliant doctor. My father's machine is no monster-maker, Mrs. Bagley. With it a person could memorize the Britannica. And from the Britannica that person would learn that there is much good in the world and also that there is rich reward for being a part of that capacity for good."

"I seem to have been outmaneuvered," said Mrs. Bagley with a worried frown.

James smiled. "Not at all," he said. "It was just a matter of finding someone who wanted desperately to have what I wanted to give, and of course overcoming the natural adult reluctance to admit that anybody my size and age can operate on grown-up terms."

"You sound so sure of yourself."

"I am sure of myself. And one of the more important things in life is to understand one's limitations."

"But couldn't you convince them--?"

"One--you--I can convince. Maybe another, later. But if I tackle the great American public, I'm licked by statistics. My guess is that there is one brand-new United States citizen born every ten seconds. It takes me longer than ten seconds to convince someone, that I know what I'm talking about. But so long as I have an accepted adult out front, running the store, I don't have to do anything but sit backstage, run the hidden strings, and wait until my period of growth provides me with a stature that won't demand any explanation."

From the playroom, Martha came running. "Mummy! Mummy!" she cried in a shrill voice filled with the strident tones of alarm, "Dolly's sick and I can't leave her!"

Mrs. Bagley folded her daughter in her arms. "We won't leave," she said. "We're staying."

James Holden nodded with satisfaction, but one thing he realized then and there: He simply had to rush the completion of his father's machine.

He could not stand the simpering prattle of Martha Bagley's playgames.

CHAPTER EIGHT

The arrival of Mrs. Bagley changed James Holden's way of life far more than he'd expected. His basic idea had been to free himself from the hours of dishwashing, bedmaking, dusting, cleaning and straightening and from the irking chore of planning his meals far enough ahead to obtain sustenance either through mail or carried note. He gave up his haphazard chores readily. Mrs. Bagley's menus often served him dishes that he wouldn't have given house-room; but he also enjoyed many meals that he could not or would not have taken the time to prepare.

He did have some faint notion that being freed from the household toil would allow him sixteen or eighteen hours at the typewriter, but he was not greatly dismayed to find that this did not work.

When he wrote himself out, he relaxed by reading, or sitting quietly planning his next piece. Even that did not fill his entire day. To take some advantage of his time, James began to indulge in talk-fests with Mrs. Bagley.

These were informative. He was learning from her how the outside world was run, from one who had no close association with his own former life. Mrs. Bagley was by no means well-informed on all sides of life, but she did have her opinions and her experiences and a fair idea of how things went on in her own level. And, of course, James had made this choice because of the girl. He wanted a companion of his own age. Regardless of what Mrs. Bagley really thought of this matter of rapid education, James proposed to use it on Martha. That would give him a companion of his own like, they would come closer to understanding one another than he could ever hope to find understanding elsewhere.

So he talked and played with Martha in his moments of relaxation. And he found her grasp of life completely unreal.

James could not get through to her. He could not make her stop play-acting in everything that she did not ignore completely. It worried him.

With the arrival of summer, James and Martha played outside in the fresh air. They made a few shopping excursions into town, walking the mile and more by taking their time, and returning with their shopping load in the station-master's taxicab mail car. But on these expeditions, James hung close to Martha lest her babbling prattle start an unwelcome line of thought. She never did it, but James was forever on edge.

This source of possible danger drove him hard. The machine that was growing in a mare's-nest on the second floor began to evolve faster.

James Holden's work was a strangely crude efficiency. The prototype had been built by his father bit by bit and step by step as its design demanded. Sections were added as needed, and other sections believed needed were abandoned as the research showed them unnecessary. Louis Holden had been a fine instrumentation engineer, but his first models were hay-wired in the breadboard form. James copied his father's work--including his father's casual breadboard style. And he added some inefficiencies of his own.

Furthermore, James was not strong enough to lift the heavier assemblies into place. James parked the parts wherever they would sit.
To Mrs. Bagley, the whole thing was bizarre and unreasonable. Given her opinion, with no other evidence, she would have rejected the idea at once. She simply did not understand anything of a technical nature.

One day she bluntly asked him how he knew what he was doing.

James grinned. "I really don't know what I'm doing," he admitted. "I'm only following some very explicit directions. If I knew the pure theory of my father's machine I could not design the instrumentation that would make it work. But I can build a reproduction of my father's machine from the directions."

"How can that be?"

James stopped working and sat on a packing case. "If you bought a lawn-mower," he said, "it might come neatly packed in a little box with all the parts nested in cardboard formers and all the little nuts and bolts packed in a bag. There would be a set of assembly directions, written in such a way as to explain to anybody who can read that Part A is fastened to Bracket B using Bolt C, Lockwasher D, and Nut E. My father's one and only recognition of the dangers of the unforeseeable future was to drill deep in my brain these directions. For instance," and he pointed to a boxed device, "that thing is an infra-low frequency amplifier. Now, I haven't much more than a faint glimmer of what the thing is and how it differs from a standard amplifier, but I know that it must be built precisely thus-and-so, and finally it must be fitted into the machine per instructions. Look, Mrs. Bagley." James picked up a recently-received package, swept a place clear on the packing case and dumped it out. It disgorged several paper bags of parts, some large plates and a box. He handed her a booklet. "Try it yourself," he said. "That's a piece of test equipment made in kit form by a commercial outfit in Michigan. Follow those directions and build it for me."

"But I don't know anything about this sort of thing."

"You can read," said James with a complete lack of respect. He turned back to his own work, leaving Mrs. Bagley leafing her way through the assembly manual.

To the woman it was meaningless. But as she read, a secondary thought rose in her mind. James was building this devilish-looking nightmare, and he had every intention of using it on her daughter! She accepted without understanding the fact that James Holden's superior education had come of such a machine--but it had been a machine built by a competent mechanic. She stole a look at James. The anomaly puzzled her.

When the lad talked, his size and even the thin boyish voice were negated by the intelligence of his words, the size of his vocabulary, the clarity of his statements. Now that he was silent, he became no more than an eight-year-old lad who could not possibly be doing anything constructive with this mad array of equipment. The messiness of the place merely made the madness of the whole program seem worse.

But she turned back to her booklet. Maybe James was right. If she could assemble this doodad without knowing the first principle of its operation, without even knowing from the name what the thing did, then she might be willing to admit that--messy as it looked--the machine could be reconstructed.

Trapped by her own interest, Mrs. Bagley pitched in.

They took a week off to rearrange the place. They built wooden shelves to hold the parts in better order. These were by no means the work of a carpenter, for Mrs. Bagley's aim with a saw was haphazard, and her batting average with a hammer was about .470; but James lacked the strength, so the construction job was hers. Crude as it was, the place looked less like a junkshop when they were done. Work resumed on the assembly of the educator.

Of course the writing suffered.

The budget ran low. James was forced to abandon the project for his typewriter. He drove himself hard, fretting and worrying himself into a stew time after time. And then as August approached, Nature stepped in to add more disorder.

James entered a "period of growth." In three weeks he gained two inches.

His muscles, his bones and his nervous system ceased to coordinate. He became clumsy. His handwriting underwent a change, so severe that James had to practically forge his own signature of Charles Maxwell. To avoid trouble he stopped the practice of writing individual checks for the bills and transferred a block sum of money to an operating account in Mrs. Bagley's name.

His fine regimen went to pieces.

He embarked on a haphazard program of sleeping, eating and working at odd hours, and his appetite became positively voracious. He wanted what he wanted when he wanted it, even if it were the middle of the night. He pouted and groused when he didn't get it. In calmer moments he hated himself for these tantrums, but no amount of self-rationalization stopped them.

During this period, James was by no means an efficient youngster. His writing suffered the ills of both his period of growth and his upset state of mind. His fingers failed to coordinate on his typewriter and his manuscript copy turned out rough, with strikeovers, xxx-outs, and gross mistakes. The pile of discarded paper massed higher than his finished copy until Mrs. Bagley took over and began to retype his rough script for him.

His state of mind remained chaotic.
Mrs. Bagley began to treat him with special care. She served him warm milk and insisted that he rest. Finally she asked him why he drove himself so hard.

"We are approaching the end of summer," he said, "and we are not prepared."

"Prepared for what?"

They were relaxing in the living room, James fretting and Mrs. Bagley seated, Martha Bagley asprawl on the floor turning the pages of a crayon-coloring book. "Look at us," he said, "I am a boy of eight, your daughter is a girl of seven. By careful dress and action I could pass for a child one year younger, but that would still make me seven. Last summer when I was seven, I passed for six."

"Yes, but--?"

"Mrs. Bagley, there are laws about compulsory education. Sooner or later someone is going to get very curious about us."

"What do you intend to do about it?"

"That's the problem," he said. "I don't really know. With a lot of concentrated effort I can probably enter school if I have to, and keep my education covered up. But Martha is another story."

"I don't see--?" Mrs. Bagley bit her lip.

"We can't permit her to attend school," said James.

"You shouldn't have advertised for a woman with a girl child!" said Mrs. Bagley.

"Perhaps not. But I wanted someone of my own age and size around so that we can grow together. I'm a bit of a misfit until I'm granted the right to use my education as I see fit."

"And you hope to make Martha another misfit?"

"If you care to put it that way," admitted James. "Someone has to start. Someday all kids will be educated with my machine and then there'll be no misfits."

"But until then--?"

"Mrs. Bagley, I am not worried about what is going to happen next year. I am worried about what is going to happen next month."

Mrs. Bagley sat and watched him for a moment. This boy was worried, she could see that. But assuming that any part of his story was true--and it was impossible to doubt it--he had ample cause.

The past years had given Mrs. Bagley a hard shell because it was useful for survival; to keep herself and her child alive she had had to be permanently alert for every threat. Clearly this was a threat. Martha was involved. Martha's future was, at the least, bound to be affected by what James did.

And the ties of blood and habit made Martha's future the first consideration in Janet Bagley's thoughts. But not the only consideration; for there is an in-born trait in the human race which demands that any helpless child should be helped. James was hardly helpless; but he certainly was a child. It was easy to forget it, talking to him--until something came up that the child could not handle.

Mrs. Bagley sighed. In a different tone she asked, "What did you do last year?"

"Played with Rags on the lawn," James said promptly. "A boy and his dog is a perfectly normal sight--in the summer. Then, when school opened, I stayed in the house as much as I could. When I had to go out I tried to make myself look younger. Short pants, dirty face. I don't think I could get away with it this year."

"I think you're right," Mrs. Bagley admitted. "Well, suppose you could do what you wish this year? What would that be?"

James said: "I want to get my machine working. Then I want to use it on Martha."

"On Martha! But--?"

James said patiently: "It won't hurt her, Mrs. Bagley. There isn't any other way. The first thing she needs is a good command of English."

"English?" Mrs. Bagley hesitated, and was lost. After all, what was wrong with the girl's learning proper speech?

"Martha is a child both physically and intellectually. She has been talked to about 'right' and 'wrong' and she knows that 'telling the truth' is right, but she doesn't recognize that talking about fairies is a misstatement of the truth. Question her carefully about how we live, and you'll get a fair approximation of the truth."

"So?"

"But suppose someone asks Martha about the Hermit of Martin's Hill?"

"What do you fear?"

"We might play upon her make-believe stronger than we have. She play-acts his existence very well. But suppose someone asks her what he eats, or where he gets his exercise, or some other personal question. She hasn't the command of logic to improvise a convincing background."

"But why should anybody ask such personal questions?" asked Mrs. Bagley.
James said patiently: "To ask personal questions of an adult is 'prying' and is therefore considered improper and antisocial. To ask the same questions of a child is proper and social. It indicates a polite interest in the world of the child. You and I, Mrs. Bagley, have a complete picture of the Hermit all prepared, and with our education we can improvise plausible answers. I've hoped to finish my machine early enough to provide Martha with the ability to do the same."

"So what can we do?"

"About the only thing we can do is to hide," said James. "Luckily, most of the business is conducted out of this place by mail. Write letters to some boarding school situated a good many miles from here. Ask the usual routine questions about entering a seven-year-old girl and an eight-year-old boy for one semester. Robert Holmes, our postmaster-taxicab driver-station-master, reads everything that isn't sealed. He will read the addresses, and he will see replies and read their return address."

"And then we'll pretend to send you and Martha to boarding school?"

James nodded. "Confinement is going to be difficult, but in this climate the weather gets nasty early and that keeps people out of one another's hair."

"But this station-master business--?"

"We've got to pull some wool over Robert's eyes," said James. "Somehow, we've got to make it entirely plausible. You've got to take Martha and me away and come back alone just as if we were in school."

"We should have a car," said Mrs. Bagley.

"A car is one piece of hardware that I could never justify," said James. "Nor," he chuckled, "buy from a mail-order house because I couldn't accept delivery. I bought furniture from Sears and had it delivered according to mailed instructions. But I figured it better to have the folks in Shipmont wondering why Charles Maxwell didn't own a car than to have them puzzling why he owned one that never was used, nor even moved. Besides, a car--costs--"

Mrs. Bagley smiled with real satisfaction. "There," she said, "I think I can help. I can buy the car."

James was startled. "But can you afford it?"

Mrs. Bagley nodded seriously. "James," she said, "I've been scratching out an existence on hard terms and I've had to make sure of tomorrow. Even when things were worst, I tried to put something away--some weeks it was only a few pennies, sometimes nothing at all. But--well, I'm not afraid of tomorrow any more."

James was oddly pleased. While he was trying to find a way to say it, Mrs. Bagley relieved him of the necessity. "It won't be a brand-new convertible," she warned. "But they tell me you can get something that runs for two or three hundred dollars. Tim Fisher has some that look about right in his garage--and besides," she said, clinching it, "it gives me a chance to give out a little more Maxwell and boarding-school propaganda."

CHAPTER NINE

The letter was a masterpiece of dissembling. It suggested, without promising, that Charles Maxwell intended to send his young charge to boarding school along with his housekeeper's daughter. It asked the school's advice and explained the deformity that made Charles Maxwell a recluse. The reply could hardly have been better if they'd penned it themselves for the signature of the faculty advisor. It discussed the pros and cons of away-from-home schooling and went on at great length to discuss the attitude of children and their upbringing amid strange surroundings. It invited a long and inconclusive correspondence--just what James wanted.

The supposed departure for school went off neatly, no one in the town of Shipmont was surprised when Mrs. Bagley turned up buying an automobile of several years' vintage because this was a community where everybody had one.

The letters continued at the rate of one every two or three weeks. They were picked up by Mrs. Bagley who let it be known that these were progress reports. In reality, they were little tracts on the theory of child education. They kept up the correspondence for the information it contained, and also because Mrs. Bagley enjoyed this contact with an outer world that contained adults.

Meanwhile, James ended his spurt of growth and settled down. Work on his machine continued when he could afford to buy the parts, and his writing settled down into a comfortable channel once more. In his spare time James began to work on Martha's diction.

Martha could not have been called a retarded child. Her trouble was lack of constant parental attention during her early years. With father gone and mother struggling to live, Martha had never overcome some of the babytalk-diction faults. There was still a trace of the omitted 'B' here and there. 'Y' was a difficult sound; the color of a lemon was "Lellow." Martha's English construction still bore marks of the baby. "Do you have to--?" came out as "Does you has to--?"

James Holden's father had struggled in just this way through his early experimental days, when he despaired of ever getting the infant James out of the baby-prattle stage. He could not force, he could not even coerce. All that his father could do was to watch quietly as baby James acquired the awareness of things. Then he could step in and
supply the correct word-sound to name the object. In those early days the progress of James Holden was no greater
than the progress of any other infant. Holden Senior followed the theory of ciphers; no cryptologist can start
unravelling a secret message until he is aware of the fact that some hidden message exists. No infant can be taught a
language until some awareness tells the tiny brain that there is some definite connection between sound and sight.

* * * * *

For the next few weeks James worked with Martha on her speech, and hated it. So slow, so dreary! But it was
necessary, he thought, to keep her from establishing any more permanent errors, so that when the machine was ready
there would be at least a blank slate to write on, not one all scribbled over with mistakes.

Time passed; the weather grew colder; the machine spread its scattered parts over his workroom.

Janet Bagley knew that the machine was growing, but it had not occurred to her that it would be finished. She
had grown accustomed to her life on Martin's Hill. By her standards, it was easy. She made three meals each day,
cleaned the rooms, hung curtains, sewed clothing for Martha and herself, did the shopping and had time enough left
over to take excursions in her little car and keep her daughter out of mischief. It was pleasant. It was more than
pleasant, it was safe.

And then the machine was finished.

Mrs. Bagley took a sandwich and a glass of milk to James and found him sitting on a chair, a heavy headset
covering most of his skull, reading aloud from a textbook on electronic theory.

Mrs. Bagley stopped at the door, unaccountably startled.

James looked up and shut off his work. "It's finished," he said with grave pride.

"All of it?"

"Well," he said, pondering, "the basic part. It works."

Mrs. Bagley looked at the scramble of equipment in the room as though it were an enemy. It didn't look
finished. It didn't even look safe. But she trusted James, although she felt at that moment that she would grow old
and die before she understood why and how any collection of apparatus could be functional and still be so untidy.

"It--could teach me?"

"If you had something you want to memorize."

"I'd like to memorize some of the pet recipes from my cookbook."

"Get it," directed James.

She hesitated. "How does it work?" she wanted to know first.

He countered with another question. "How do we memorize anything?"

She thought. "Why, by repeating and repeating and rehearsing and rehearsing."

"Yes," said James. "So this device does the repetition for you. Electromechanically."

"But how?"

James smiled wistfully. "I can give you only a thumbnail sketch," he said, "until I have had time to study the
subjects that lead up to the final theory."

"Goodness," exclaimed Mrs. Bagley, "all I want is a brief idea. I wouldn't understand the principles at all."

"Well, then, my mother, as a cerebral surgeon, knew the anatomy of the human brain. My father, as an
instrument-maker, designed and built encephalographs. Together, they discovered that if the great waves of the brain
were filtered down and the extremely minute waves that ride on top of them were amplified, the pattern of these
superfine waves went through convolutions peculiar to certain thoughts. Continued research refined their discovery.

"Now, the general theory is that the cells of the brain act sort of like a binary digital computer, with certain
banks of cells operating to store sufficient bits of information to furnish a complete memory. In the process of
memorization, individual cells become activated and linked by the constant repetition.

"Second, the brain within the skull is a prisoner, connected to the 'outside' by the five standard sensory channels
of sight, sound, touch, taste, and smell. Stimulate a channel, and the result is a certain wave-shape of electrical
impulse that enters the brain and--sort of like the key to a Yale lock--fits only one combination of cells. Or if no
previous memory is there, it starts its own new collection of cells to linking and combining. When we repeat and
repeat, we are deepening the groove, so to speak.

"Finally comes the Holden Machine. The helmet makes contact with the skull in those spots where the probes
of the encephalograph are placed. When the brain is stimulated into thought, the brain waves are monitored and
recorded, amplified, and then fed back to the same brain-spots. Not once, but multifold, like the vibration of a reed
or violin string. The circuit that accepts signals, amplifies them, returns them to the same set of terminals, and causes
them to be repeated several hundred times per millisecond without actually ringing or oscillating is the real research
secret of the machine. My father's secret and now mine."

"And how do we use it?"

"You want to memorize a list of ingredients," said James. "So you will put this helmet on your head with the
cookbook in your hands. You will turn on the machine when you have read the part you want to memorize just to be sure of your material. Then, with the machine running, you carefully read aloud the passage from your book. The vibrating amplifier in the machine monitors and records each electrical impulse, then furnishes it back to your brain as a successive series of repetitious vibrations, each identical in shape and magnitude, just as if you had actually read and re-read that list of stuff time and again.

"And then I'll know it cold?"

James shook his head. "Then you'll be about as confused as you've ever been. For several hours, none of it will make sense. You'll be thinking things like a 'cup of salt and a pinch of water,' or maybe, 'sugar three of mustard and two spoonthree teas.' And then in a few hours all of this mish-mash will settle itself down into the proper serial arrangement; it will fit the rest of your brain-memory-pattern comfortably."

"Why?"

"I don't know. It has something to do with the same effect one gets out of studying. On Tuesday one can read a page of textbook and not grasp a word of it. Successive readings help only a little. Then in about a week it all becomes quite clear, just as if the brain had sorted it and filed it logically among the other bits of information. Well, what about that cookbook?"

"Yes," said Mrs. Bagley, with the air of someone agreeing to have a tooth pulled when it hasn't really started to hurt, "I'll get it."

* * * * *

James Holden allowed himself a few pleasant daydreams. The most satisfactory of all was one of himself pleading his own case before the black-robed Justices of the Supreme Court, demolishing his detractors with a flow of his brilliance and convincing them beyond any doubt that he did indeed have the right to walk alone. That there be no question of his intellect, James proposed to use his machine to educate himself to completion. He would be the supreme student of the arts and the sciences, of law, language, and literature. He would know history and the humanities, and the dreams and aims of the great philosophers and statesmen, and he would even be able to quote in their own terms the drives of the great dictators and some of the evil men so that he could draw and compare to show that he knew the difference between good and bad.

But James Holden had no intention of sharing this limelight.

His superb brilliance was to be compared to the average man's, not to another one like him. He had the head start. He intended to keep it until he had succeeded in compelling the whole world to accept him with the full status of a free adult.

Then, under his guidance, he would permit the world-wide use of his machine.

His loneliness had forced him to revise that dream by the addition of Martha Bagley: he needed a companion, contemporary, and foil. His mental playlet no longer closed with James Holden standing alone before the Bench. Now it ended with Martha saying proudly, "James, I knew you could do it."

Martha Bagley's brilliance would not conflict with his. He could stay ahead of her forever. But he had no intention of allowing some experienced adult to partake of this program of enforced education. He was, therefore, going to find himself some manner or means of preventing Mrs. Bagley from running the gamut of all available information.

James Holden evaluated all people in his own terms, he believed that everybody was just as eager for knowledge as he was.

So he was surprised to find that Mrs. Bagley's desire for extended education only included such information as would make her own immediate personal problems easier. Mrs. Bagley was the first one of the mass of people James was destined to meet who not only did not know how or why things worked, but further had no intention whatsoever of finding out.

Instead of trying to monopolize James Holden's machine, Mrs. Bagley was satisfied to learn a number of her pet recipes. After a day of thought she added her social security number, blood type, some birthdays, dates, a few telephone numbers and her multiplication tables. She announced that she was satisfied. It solved James Holden's problem—and stunned him completely.

But James had very little time to worry about Mrs. Bagley's attitude. He found his hands full with Martha.

Martha played fey. Her actions and attitude baffled James, and even confused her mother. There was no way of really determining whether the girl was scared to death of the machine itself, or whether she simply decided to be difficult. And she uttered the proper replies with all of the promptness—and intelligence—of a ventriloquist's dummy:

"You don't want to be ignorant, do you?"

"No."

"You want to be smart, like James, don't you?"

"Yes."
"You know the machine won't hurt, don't you?"
"Yes."
"Then let's try it just once, please?"
"No."

Back to the beginning again. Martha would agree to absolutely anything except the educator.

Leaving the argument to Mrs. Bagley, James sat down angrily with a book. He was so completely frustrated that he couldn't read, but he sat there leafing the pages slowly and making a determined show of not lifting his head.

Mrs. Bagley went on for another hour before she reached the end of her own patience. She stood up almost rigid with anger. James never knew how close Mrs. Bagley was to making use of a hairbrush on her daughter's bottom. But Mrs. Bagley also realized that Martha had to go into this process willing to cooperate. So, instead of physical punishment, she issued a dictum:

"You'll go to your room and stay there until you're willing!"

And at that point Martha ceased being stubborn and began playing games.

She permitted herself to be led to the chair, and then went through a routine of skittishness, turning her head and squirming incessantly, which made it impossible for James to place the headset properly. This went on until he stalked away and sat down again. Immediately Martha sat like a statue. But as soon as James reached for the little screws that adjusted the electrodes, Martha started to giggle and squirm. He stalked away and sat through another session between Martha and her mother.

Late in the afternoon James succeeded in getting her to the machine; Martha uttered a sentence without punctuating it with little giggles, but it came as elided babytalk.

"Again," he commanded.
"I don't wan' to."
"Again!" he snapped.
Martha began to cry.

That, to James, was the end. But Mrs. Bagley stepped forward with a commanding wave for James to vacate the premises and took over. James could not analyze her expression, but it did look as if it held relief. He left the room to them; a half hour later Mrs. Bagley called him back.

"She's had it," said Mrs. Bagley. "Now you can start, I think."
James looked dubious; but said, "Read this."
"Martha?"
Martha took a deep breath and said, nicely, '"A' is the first letter of the English Alphabet."
"Good." He pressed the button. "Again? Please?"
Martha recited it nicely.
"Fine," he said. "Now we'll look up 'Is' and go on from there."
"My goodness," said Mrs. Bagley, "this is going to take months."
"Not at all," said James. "It just goes slowly at the start. Most of the definitions use the same words over and over again. Martha really knows most of these simple words, we've just got to be dead certain that her own definition of them agrees wholly and completely with ours. After a couple of hours of this minute detail, we'll be skipping over everything but new words. After all, she only has to work them over once, and as we find them, we'll mark them out of the book. Ready, Martha?"
"Can't read it."
James took the little dictionary. "Um," he said. "Hadn't occurred to me."
"What?" asked Mrs. Bagley.
"This thing says, 'Three-rd pers period sing periodic indic period of Be,' the last in heavy bold type. Can't have Martha talking in abbreviations," he chuckled. He went to the typewriter and wrote it out fully. "Now read that," he directed.

She did and again the process went through without a hitch. Slowly, but surely, they progressed for almost two hours before Martha rebelled. James stopped, satisfied with the beginning.
But as time wore on into the late autumn, Martha slowly--oh, so slowly!--began to realize that there was importance to getting things right. She continued to tease. But she did her teasing before James closed the "Run" button.

CHAPTER TEN

Once James progressed Martha through the little dictionary, he began with a book of grammar. Again it started slowly; he had to spend quite a bit of time explaining to Martha that she did indeed know all of the terms used in the book of grammar because they'd all been defined by the dictionary, now she was going to learn how the terms and their definitions were used.

James was on more familiar ground now. James, like Martha, had learned his first halting sentence structure by mimicking his parents, but he remembered the process of learning why and how sentences are constructed according to the rules, and how the rules are used rather than intuition in forming sentences.

Grammar was a topic that could not be taken in snippets and bits. Whole paragraphs had to be read until Martha could read them without a halt or a mispronunciation, and then committed to memory with the "Run" button held down. At the best it was a boring process, even though it took only minutes instead of days. It was not conflicting, but it was confusing. It installed permanently certain solid blocks of information that were isolated; they stood alone until later blocks came in to connect them into a whole area.

Each session was numbing. Martha could take no more than a couple of hours, after which her reading became foggy. She wanted a nap after each session and even after the nap she went around in a bemused state of mental dizziness.

Life settled down once more in the House on Martin's Hill. James worked with the machine himself and laid out lessons to guide Martha. Then, finished for the day with education, James took to his typewriter while Martha had her nap. It filled the days of the boy and girl completely.

This made an unexpected and pleasant change in Mrs. Bagley's routine. It had been a job to keep Martha occupied. Now that Martha was busy, Mrs. Bagley found time on her own hands; without interruption, her housework routine was completed quite early in the afternoon.

Mrs. Bagley had never made any great point of getting dressed for dinner. She accumulated a collection of house-frocks; printed cotton washables differing somewhat in color and cut but functionally identical. She wore them serially as they came from the row of hangers in her closet.

Now she began to acquire some dressier things, wearing them even during her shopping trips.

James paid little attention to this change in his housekeeper's routine, but he approved. Mrs. Bagley was also taking more pains with the 'do' of her hair, but the boy's notice was not detailed enough to take a part-by-section inventory of the whole. In fact, James gave the whole matter very little thought until Mrs. Bagley made a second change after her return from town, appearing for dinner in what James could only classify as a party dress.

She asked, "James, do you mind if I go out this evening?"

"You'll keep an ear out for Martha?"

"I first saw that old horror when I was about your age," she told him with a trace of disdain.

"I liked it."

"So did I at eight and a half. But tonight I'm going to see a new picture."

"Okay," said James, wondering why anybody in their right mind would go out on a chilly night late in November just to see a moving picture when they could stay at home and watch one in comfort. "Have a good time."

He expected Mrs. Bagley to take off in her car, but she did not. She waited until a brief toot! came from the road. Then, with a swirl of motion, she left.

It took James Holden's limited experience some little time to identify the event with some similar scenes from books he'd read; even with him, reading about it was one world and seeing it happen was another thing entirely.

For James Holden it opened a new area for contemplation. He would have to know something about this matter if he hoped to achieve his dreamed-of status as an adult.

Information about the relation between man and woman had not been included in the course of education devised by his father and mother. Therefore his physical age and his information on the delicate subject were approximately parallel.

His personal evaluation of the subject was uncomplicated. At some age not much greater than his own, boys and girls conglomerated in a mass that milled around in a constant state of flux and motion, like individual atoms of
gas compressed in a container. Meetings and encounters took place both singly and in groups until nearly everybody had been in touch with almost everybody else. Slowly the amorphous mass changed. Groups became attracted by mutual interests. Changes and exchanges took place, and then a pair-formation began to take place. The pair-formation went through its interchanges both with and without friction as the settling-down process proceeded. At times predictable by comparing it to the statistics of radioactivity, the pair-production resulted in permanent combination, which effectively removed this couple from free circulation.

James Holden had no grasp or feeling for the great catalyst that causes this pair-production; he saw it only for its sheer mechanics. To him, the sensible way to go about this matter was to get there early and move fast, because one stands to make a better choice when there is a greater number of unattached specimens from which to choose. Those left over are likely to have flaws.

And so he pondered, long after Martha had gone to bed. He was still up and waiting when he heard the car stop at the gate. He watched them come up the walk arm in arm, their stride slow and lingering. They paused for several moments on the doorstep, once there was a short, muted laugh. The snick of the key came next and they came into the hallway.

"No, please don't come in," said Mrs. Bagley.
"But--" replied the man.
"But me no buts. It's late, Tim."
Tim? Tim? That would probably be Timothy Fisher. He ran the local garage where Mrs. Bagley bought her car.

James went on listening shamelessly.
"Late? Phooey. When is eleven-thirty late?"
"When it's right now," she replied with a light laugh. "Now, Tim. It's been very--"
There came a long silence.

"Now, will you go?"
"Of course," he said.
"Not that way, silly," she said. "The door's behind you."
"Isn't the door I want," he chuckled.
"We're making enough noise to wake the dead," she complained.
"Then let's stop talking," he told her.
"The door's behind you," she said again.
"There was another long silence.
"Late? Phooey. When is eleven-thirty late?"
"When it's right now," she replied with a light laugh. "Now, Tim. It's been very--"
There came a long silence.
Her voice was throaty when the silence broke. "Now, will you go?"
"Of course," he said.
"Not that way, silly," she said. "The door's behind you."
"Isn't the door I want," he chuckled.
"We're making enough noise to wake the dead," she complained.
"Then let's stop talking," he told her.
"The door's behind you," she said again.

"Now please go."
"Can I come back tomorrow night?"
"Not tomorrow."
"Friday?"
"Saturday."
"It's a date, then."
"All right. Now get along with you."
"You're cruel and heartless, Janet," he complained. "Sending a man out in that cold and storm."
"It isn't storming, and you've a fine heater in that car of yours."
"I'd rather have you."
"Do you tell that to all the girls?"
"Sure. Even Maggie the Washerwoman is better than an old car heater."
Mrs. Bagley chuckled throatily. "How is Maggie?"
"She's fine."
"I mean as a date."
"Better than the car heater."
"Tim, you're a fool."
"When I was a kid," said Tim reflectively, "there used to be a female siren in the movies. Her pet line used to be 'Kiss me, my fool!' Theda Bara, I think. Before talkies. Now--"
"No, Tim--"
Another long silence.
"Now, Tim, you've simply got to go!"
"Yeah, I know. You've convinced me."
"Then why aren't you going?"
He chuckled. "Look, you've convinced me. I can't stay so I'll go, obviously. But now that we've covered this problem, let's drop the subject for a while, huh?"
"Don't spoil a fine evening, Tim."
"Janet, what's with you, anyway?"
"What do you mean, 'what's with me'?"
"Just this. Somewhere up in the house is this oddball Maxwell who hides out all the time. He's either asleep or busy. Anyway, he isn't here. Do you have to report in, punch a time clock, tuck him in—or do you turn into a pumpkin at the stroke of twelve?"
"Mr. Maxwell is paying me wages to keep house for him. That's all. Part of my wages is my keep. But it doesn't entitle me to have full run of the house or to bring guests in at midnight for a two-hour good-night session."
"I'd like to tell this bird a thing or two," said Tim Fisher sharply. "He can't keep you cooped up like--like--"
"Nobody is keeping me cooped up," she said. "Like what?"
"What?"
"You said 'like--'"
"Skip it. What I meant is that you can't moulder, Janet. You've got to get out and meet people."
"I've been out and I've met people. I've met you."
"All to the good."
"Fine. So you invited me out, and I went. It was fun. I liked it. You've asked me, and I've said that I'd like to do it again on Saturday. I've enjoyed being kissed, and I'll probably enjoy it again on Saturday. So--"
"I'd think you'd enjoy a lot of it."
"Because my husband has been gone for five years?"
"Oh, now Janet--"
"That's what you meant, isn't it?"
"No. You've got me wrong."
"Tim, stop it. You're spoiling a fine evening. You should have gone before it started to spoil. Now please put your smile on again and leave cheerfully. There's always Saturday—if you still want it."
"I'll call you," he said.
The door opened once more and then closed. James took a deep breath, and then stole away quietly to his own room.

By some instinct he knew that this was no time to intercept Mrs. Bagley with a lot of fool questions.

* * * * *

To the surprise and puzzlement of young James Quincy Holden, Mr. Timothy Fisher telephoned early upon the following evening. He was greeted quite cordially by Mrs. Bagley. Their conversation was rambling and inane, especially when heard from one end only, and it took them almost ten minutes to confirm their Saturday night date. That came as another shock.

Well, not quite. The explanation bothered him even more than the fact itself. As a further extension of his little mechanical mating process, James had to find a place for the like of Jake Caslow and the women Jake knew. None of them were classed in the desirable group, all of them were among the leftovers. But of course, since none of them were good enough for the 'good' people, they were good enough for one another, and that made it all right—for them.

But Mrs. Bagley was not of their ilk. It was not right that she should be forced to take a leftover.

And then it occurred to him that perhaps Mrs. Bagley was not really taking the leftover, Tim Fisher, but instead was using Tim Fisher's company as a means toward meeting a larger group, from which there might be a better specimen. So he bided his time, thinking deeply around the subject, about which he knew nothing whatsoever.

Saturday night was a repeat of Wednesday. They stayed out later, and upon their return they took possession of the living room for at least an hour before they started their routine about the going-home process. With minor variations in the dialog, and with longer and more frequent silences, it almost followed the Wednesday night script. The variation puzzled James even more. This session went according to program for a while until Tim Fisher admitted with regret that it was, indeed, time for him to depart. At which juncture Mrs. Bagley did not leap to her feet to accept his offer to do that which she had been asking him to do for a half hour. Mrs. Bagley compounded the affair by sighing deeply and agreeing with him that it was a shame that it was so late and that she, too, wished that he could stay a little longer. This, of course, put them precisely where they were a half hour earlier and they had to start the silly business all over again.

They parted after a final fifteen-minute discussion at the front door. This discussion covered Sunday, Monday, Tuesday, and finally came to agreement on Wednesday.

And so James Holden went to bed that night fully convinced that in a town of approximately two thousand people—he did not count the two or three hundred A.E.C.-College group as part of the problem—there were entirely too few attractive leftovers from which Mrs. Bagley could choose.

But as this association grew, it puzzled him even more. For in his understanding, any person forced to accept a second-rate choice does so with an air of resignation, but not with a cheerful smile, a sparkle in the eyes, and two
hours of primping.

James sought the answer in his books but they were the wrong volumes for reference of this subject. He considered the local Public Library only long enough to remember that it carried a few hundred books suitable for the A.E.C.-College crew and a thousand or so of second-hand culls donated by local citizens during cleanup campaigns. He resorted to buying books by mail through advertisements in newspapers and magazines and received a number of volumes of medical treatises, psychological texts, and a book on obstetrics that convinced him that baby-having was both rare and hazardous. He read By Love Possessed but he did not recognize the many forms of love portrayed by the author because the volume was not annotated with signs or provided with a road map, and he did not know it when he read about it.

He went through the Kinsey books and absorbed a lot of data and graphs and figures on human behavior that meant nothing to him. James was not even interested in the incidence of homosexuality among college students as compared to religious groups, or in the comparison between premarital experience and level of education. He knew the words and what the words meant as defined in other words. But they were only words and did not touch him where he lived.

So, because none of the texts bothered to explain why a woman says Yes, when she means No, nor why a woman will cling to a man's lapels and press herself against him and at the same time tell him he has to go home, James remained ignorant. He could have learned more from Lord Byron, Shelley, Keats, or Browning than from Kinsey, deLee, or the "Instructive book on Sex, forwarded under plain wrapper for $2.69 postpaid."

Luckily for James, he did not study any of his material via the medium of his father's machine or it would have made him sick. For he was not yet capable of understanding the single subject upon which more words have been expended in saying less than any other subject since the dawn of history.

His approach was academic, he could have been reading the definitive material on the life-cycle of the beetle insofar as any stir of his own blood was concerned.

From his study he did identify a couple of items. Tim Fisher obviously desired extramarital relations with Mrs. Bagley--or was it premarital relations? Probably both. Logic said that Mrs. Bagley, having already been married to Martha's father, could hardly enter into premarital relations, although Tim could, since he was a bachelor. But they wouldn't be premarital with Tim unless he followed through and married Mrs. Bagley. And so they must be extramarital. But whatever they were called, the Book said that there was about as much on one side as on the other.

With a mind mildly aware of the facts of life, distorted through the eyes of near-nine James Holden, he watched them and listened in.

As for Mrs. Bagley, she did not know that she was providing part of James Holden's extraliterary education. She enjoyed the company of Tim Fisher. Hesitantly, she asked James if she could have Tim for dinner one evening, and was a bit surprised at his immediate assent. They planned the evening, cleaned the lower part of the house of every trace of its current occupancy, and James and Martha hied themselves upstairs. Dinner went with candlelight and charcoal-broiled steak--and a tray taken aloft for "Mr. Maxwell" was consumed by James and Martha. The evening went smoothly. They listened to music and danced, they sat and talked. And James listened.

Tim was not the same man. He sat calm and comfortably on the low sofa with Mrs. Bagley's head on his shoulder, both of them pleasantly bemused by the dancing fireplace and with each other's company. He said, "Well, I'm glad this finally happened."

"What happened?" she replied in a murmur.
"Getting the invite for dinner."
"Might have been sooner, I suppose. Sorry."
"What took you so long?"
"Just being cautious, I guess."
He chuckled. "Cautious?"
"Uh-huh."
Tim laughed.
"What's so darned funny?"
"Women."
"Are we such a bunch of clowns?"
"Not clowns, Janet. Just funny."
"All right, genius. Explain that."
"A woman is a lovely creature who sends a man away so that he can't do what she wants him to do most of all."
"Uh-huh."
"She feeds him full of rare steak until he wants to crawl off in a corner like the family mutt and go to sleep. Once she gets him in a somnolent state, she drapes herself tastefully on his shoulder and gets soft and warm and
"willing."

Mrs. Bagley laughed throatily. "Just start getting active," she warned, "and you'll see how fast I can beat a hasty retreat."

"Janet, what is with you?"
"What do you mean?"
"What are you hiding?"
"Hiding?"
"Yes, confound it, hiding!" he said, his voice turning hard. "Just who is this Charles Maxwell character, anyway?"

"Tim, please--"

His voice lowered again. "Janet," he said softly, "you're asking me to trust you, and at the same time you're not trusting me."

"But I've nothing to hide."
"Oh, stop it. I'm no schoolboy, Janet. If you have nothing to hide, why are you acting as if you were sitting on the lid?"

"I still don't know what you're talking about."

"Your words say so, but your tone is the icy haughtiness that dares me, mere male that I am, to call your lie. I've a half-notion to stomp upstairs and confront your mysterious Maxwell—if he indeed exists."

"You mustn't. He'd—"

"He'd what? I've been in this house for hours day and night and now all evening. I've never heard a sound, not the creak of a floorboard, the slam of a door, the opening of a window, nor the distant gurgle of cool, clear water, gushing into plumbing. So you've been married. This I know. You have a daughter. This I accept. Your husband is dead. This happens to people every day; nice people, bad people, bright people, dull people. There was a young boy here last summer. Him I do not know, but you and your daughter I do know about. I've checked—"

"How dare you check—?"

"I damn well dare check anything and anybody I happen to be personally interested in," he stormed. "As a potential bed partner I wouldn't give a hoot who you were or what you were. But before I go to the point of dividing the rest of my life on an exclusive contract, I have the right to know what I'm splitting it with."

"You have no right—"

"Balderdash! I have as much right as anybody to look at the record. I grant you the same right to look up my family and my friends and the status of my bank account and my credit rating and my service record. Grant it? Hell, I couldn't stop you. Now, what's going on? Where is your daughter and where is that little boy? And where—if he exists—is this Charles Maxwell?"

* * * * *

James had heard enough. No matter which way this was going, it would end up wrong. He was proud of Mrs. Bagley's loyalty, but he knew that it was an increasing strain and could very well lead to complications that could not be explained away without the whole truth. He decided that the only thing to do was to put in his own oar and relieve Mrs. Bagley.

He walked in, yawning. He stood between them, facing Tim Fisher. Behind him, Mrs. Bagley cried, "Now see—you've awakened him!"

In a dry-throated voice, Tim said, "I thought he was away at school. Now, what's the story?"

"It isn't her story to tell," said James. "It's mine."

"Now see here—"

"Mr. Fisher, you can't learn anything by talking incessantly."

Tim Fisher took a step forward, his face dark, his intention to shake the truth out of somebody. James held up a hand. "Sit down a moment and listen," he ordered.

The sight of James and the words that this child was uttering stopped Tim Fisher. Puzzled, he nodded dumbly, found a chair, and sat on the front edge of it, poised.

"The whereabouts of Mr. Maxwell is his own business and none of yours. Your criticism is unfounded and your suspicions unworthy. But since you take the attitude that this is some of your business, we don't mind telling you that Mr. Maxwell is in New York on business."

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Tim Fisher eyed the youngster. "I thought you were away at school," he repeated.

"I heard you the first time," said James. "Obviously, I am not. Why I am not is Mr. Maxwell's business, not yours. And by insisting that something is wrong here and demanding the truth, you have placed Mrs. Bagley in the awkward position of having to make a decision that divides her loyalties. She has had the complete trust of Mr. Maxwell for almost a year and a half. Now, tell me, Mr. Fisher, to whom shall she remain loyal?"
"That isn't the point--"
"Yes, it is the point, Mr. Fisher. It is exactly the point. You're asking Mrs. Bagley to tell you the details of her employer's business, which is unethical."
"How much have you heard?" demanded Fisher crossly.
"Enough, at least to know what you've been hammering at."
"Then you know that I've as much as said that there was some suspicion attached."
"Suspicion of what?"
"Well, why aren't you in school?"
"That's Mr. Maxwell's business."
"Let me tell you, youngster, it is more than your Mr. Maxwell's business. There are laws about education and he's breaking them."

James said patiently: "The law states that every child shall receive an adequate education. The precise wording I do not know, but it does provide for schooling outside of the state school system if the parent or guardian so prefers, and providing that such extraschool education is deemed adequate by the state. Can you say that I am not properly educated, Mr. Fisher?"
"Well, you'd hardly expect me to be an expert on the subject."
"Then I'd hardly expect you to pass judgment, either," said James pointedly.
"You're pretty--" Tim Fisher caught his tongue at the right moment. He felt his neck getting hot. It is hard enough to be told that you are off-base and that your behavior has been bad when an adult says the damning words. To hear the same words from a ten-year-old is unbearable. Right or wrong, the adult's position is to turn aside or shut the child up either by pulling rank or cuffing the young offender with an open hand. To have this upstart defend Mrs. Bagley, in whose presence he could hardly lash back, put Mr. Fisher in a very unhappy state of mind. He swallowed and then asked, lamely, "Why does he have to be so furtive?"
"What is your definition of 'furtive'?" asked James calmly. "Do you employ the same term to describe the operations of that combination College-A.E.C. installation on the other side of town?"
"That's secret--"
"Implying that atomic energy is secretly above-board, legal, and honorable, whereas Mr. Maxwell's--"
"But we know about atomic energy."
"Sure we do," jeered James, and the sound of his immature near-treble voice made the jeer very close to an insult. "We know all about atomic energy. Was the Manhattan Project called 'furtive' until Hiroshima gave the story away?"
"You're trying to put words in my mouth," objected Tim.
"No, I'm not. I'm merely trying to make you understand something important to everybody. You come in here and claim by the right of personal interest that we should be most willing to tell you our business. Then in the next breath you defend the installation over on the other side of town for their attitude in giving the bum's rush to people who try to ask questions about their business. Go read your Constitution, Mr. Fisher. It says there that I have as much right to defend my home against intruders as the A.E.C. has to defend their home against spies."
"But I'm not intruding."

James nodded his head gently. "Not," he said, "until you make the grave error of equating personal privacy with culpable guilt."
"I didn't mean that."
"You should learn to say what you mean," said James, "instead of trying to pry information out of someone who happens to be fond of you."
"Now see here," said Tim Fisher, "I happen to be fond of her too, you know. Doesn't that give me some rights?"
"Would you expect to know all of her business if she were your wife?"
"Of course."
"Suppose she were working in the A.E.C.-College?"
"Well, that--er--"
"Would be different?"
"Well, now--"
"I talked this right around in its circle for a purpose," said James. "Stop and think for a moment. Let's discuss me. Mr. Fisher, where would you place me in school?"
"Er--how old are you?"
"Nine," said James. "In April."
"Well, I'm not sure--"
"Exactly. Do you suppose that I could sit in a classroom among my nine-year-old contemporaries very long
without being found out?"
"Er—no—I suppose not."
"Mr. Fisher, how long do you think I could remain a secret if I attended high school, sitting at a specially
installed desk in a class among teenagers twice my size?"
"Not very long."
"Then remember that some secrets are so big that you have to have armed guards to keep them secret, and
others are so easy to conceal that all you need is a rambling old house and a plausible façade."
"Why have you told me all this?"
"Because you have penetrated this far by your own effort, justified by your own personal emotions, and driven
by an urge that is all-powerful if I am to believe the books I've read on the subject. You are told this much of the
truth so that you won't go off half-cocked with a fine collection of rather dangerous untruths. Understand?"
"I'm beginning to."
"Well, whether Mrs. Bagley accepts your offer of marriage or not, remember one thing: If she were working for
the A.E.C. you'd be proud of her, and you'd also be quite careful not to ask questions that would cause her
embarrassment."

Tim Fisher looked at Mrs. Bagley. "Well?" he asked.

Mrs. Bagley looked bleak. "Please don't ask me until I've had a chance to discuss all of the angles with Mr.
Maxwell, Tim."

"Maxwell, again."
"Tim," she said in a quiet voice, "remember—he's an employer, not an emotional involvement."

James Holden looked at Tim Fisher. "And if you'll promise to keep this thing as close a secret as you would
some information about atomic energy, I'll go to bed and let you settle your personal problems in private. Good
night!"

He left, reasonably satisfied that Tim Fisher would probably keep their secret for a time, at least. The hinted
suggestion that this was as important a government project as the Atomic Energy Commission's works would
prevent casual talk. There was also the slim likelihood that Tim Fisher might enjoy the position of being on the
inside of a big secret, although this sort of inner superiority lacks true satisfaction. There was a more solid chance
that Tim Fisher, being the ambitious man that he was, would keep their secret in the hope of acquiring for himself
some of the superior knowledge and the advanced ability that went with it.

But James was certain that the program that had worked so well with Mrs. Bagley would fail with Tim Fisher.
James had nothing material to offer Tim. Tim was the kind of man who would insist upon his wife being a full-time
wife, physically, emotionally, and intellectually.

And James suddenly realized that Tim Fisher's own ambition and character would insist that Mrs. Bagley, with
Martha, leave James Holden to take up residence in a home furnished by Tim Fisher upon the date and time she
became Mrs. Timothy Fisher.

He was still thinking about the complications this would cause when he heard Tim leave. His clock said three-
thirty.

* * * * *

James Holden's mechanical educator was a wonderful machine, but there were some aspects of knowledge that
it was not equipped to impart. The glandular comprehension of love was one such; there were others. In all of his
hours under the machine James had not learned how personalities change and grow.

And yet there was a textbook case right before his eyes.

In a few months, Janet Bagley had changed from a frightened and belligerent mother-animal to a cheerful
young prospective wife. The importance of the change lay in the fact that it was not polar, nothing reversed; it was
only that the emphasis passed gradually from the protection of the young to the development of Janet Bagley herself.

James could not very well understand, though he tried, but he couldn't miss seeing it happen. It was worrisome.
It threatened complications.

There was quite a change that came with Tim Fisher's elevation in status from steady date to affianced husband,
heightened by Tim Fisher's partial understanding of the situation at Martin's Hill.

Then, having assumed the right to drop in as he pleased, he went on to assume more "rights" as Mrs. Bagley's
fiancé. He brought in his friends from time to time. Not without warning, of course, for he understood the need for
secrecy. When he brought friends it was after warning, and very frequently after he had helped them to remove the
traces of juvenile occupancy from the lower part of the house.

In one way, this took some of the pressure off. The opening of the "hermit's" house to the friends of the
"hermit's" housekeeper's fiancé and friends was a pleasant evidence of good will; people stopped wondering, a little.

On the other hand, James did not wholly approve. He contrasted this with what he remembered of his own
home life. The guests who came to visit his mother and father were quiet and earnest. They indulged in animated discussions, argued points of deep reasoning, and in moments of relaxation they indulged in games that demanded skill and intellect.

Tim Fisher's friends were noisy and boisterous. They mixed highballs. They danced to music played so loud that it made the house throb. They watched the fights on television and argued with more volume than logic.

They were, to young James, a far cry from his parents' friends.

But, as he couldn't do anything about it, he refused to worry about it. James Holden turned his thoughts forward and began to plan how he was going to face the culmination of this romance next September Fifteenth. He even suspected that there would probably be a number of knotty little problems that he now knew nothing about; he resolved to allow some thinking-time to cope with them when, as, and if.

In the meantime, the summer was coming closer.

He prepared to make a visible show of having Mr. Charles Maxwell leave for a protracted summer travel. This would ease the growing problem of providing solid evidence of Maxwell's presence during the increasing frequency of Tim Fisher's visits and the widening circle of Mrs. Bagley's acquaintances in Shipmont. At the same time he and Martha would make a return from the Bolton School for Youth. This would allow them their freedom for the summer; for the first time James looked forward to it. Martha Bagley was progressing rapidly. This summer would see her over and done with the scatter-brain prattle that gave equal weight to fact or fancy. Her store of information was growing; she could be relied upon to maintain a fairly secure cover. Her logic was not to James Holden's complete satisfaction but she accepted most of his direction as necessary information to be acted upon now and reasoned later.

In the solving of his immediate problems, James can be forgiven for putting Paul Brennan out of his mind.

CHAPTER ELEVEN

But Paul Brennan was still alive, and he had not forgotten.

While James was, with astonishing success, building a life for himself in hiding, Brennan did everything he could to find him. That is to say, he did everything that—under the circumstances—he could afford to do.

The thing was, the boy had got clean away, without a trace.

When James escaped for the third, and very successful, time, Brennan was helpless. James had planned well. He had learned from his first two efforts. The first escape was a blind run toward a predictable objective; all right, that was a danger to be avoided. His second was entirely successful—until James created his own area of danger. Another lesson learned.

The third was planned with as much care as Napoleon's deliverance from the island.

James had started by choosing his time. He'd waited until Easter Week. He'd had a solid ten days during which he would be only one of countless thousands of children on the streets; there would be no slight suspicion because he was out when others were in.

* * * * *

James didn't go to school that day. That was common; children in the lower grades are often absent, and no one asks a question until they return, with the proper note from the parent. He was not missed anywhere until the school bus that should have dropped him off did not. This was an area of weakness that Brennan could not plug; he could hardly justify the effort of delivering and fetching the lad to and from school when the public school bus passed the Holden home. Brennan relied upon the Mitchells to see James upon the bus and to check him off when he returned. Whether James would have been missed earlier even with a personal delivery is problematical; certainly James would have had to concoct some other scheme to gain him his hours of free time.

At any rate, the first call to the school connected the Mitchells with a grumpy-voiced janitor who growled that teachers and principals had headed for their hills of freedom and wouldn't be back until Monday Week. It took some calling to locate a couple of James Holden's classmates who asserted that he hadn't been in school that day.

Paul Brennan knew at once what had happened, but he could not raise an immediate hue-and-cry. He fretted because of the Easter Week vacation; in any other time the sight of a school-aged boy free during school hours would have caused suspicion. During Easter Week vacation, every schoolboy would be free. James would also be protected by his size. A youngster walking alone is not suspect; his folks must be close by. The fact that it was "again" placed Paul Brennan in an undesirable position. This was not the youthful adventure that usually ends about three blocks from home. This was a repeat of the first absence during which James had been missing for months. People smile at the parents of the child who packs his little bag with a handkerchief and a candy bar to sally forth into the great big world, but it becomes another matter when the lad of six leaves home with every appearance of making it stick. So Brennan had to play it cozy, inviting newspaper reporters to the Holden home to display what he had to offer young James and giving them free rein to question Brennan's housekeeper and general factotum, the Mitchells. With honest-looking zeal, Paul Brennan succeeded in building up a picture that depicted James as
ungrateful, hard to understand, wilful, and something of an intellectual brat.

Then the authorities proceeded to throw out a fine-mesh dragnet. They questioned and cross-questioned bus drivers and railroad men. They made contact with the local airport even though its facilities were only used for a daisy-cutting feeder line. Posters were printed and sent to all truck lines for display to the truck drivers. The roadside diners were covered thoroughly. And knowing the boy's ability to talk convincingly, the authorities even went so far as to try the awesome project of making contact with passengers bound out-of-town with young male children in tow.

Had James given them no previous experience to think about, he would have been merely considered a missing child and not a deliberate runaway. Then, instead of dragging down all of the known avenues of standard escape, the townspeople would have organized a tree-by-tree search of the fields and woods with hundreds of men walking hand in hand to inspect every square foot of the ground for either tracks or the child himself. But the modus operandi of young James Holden had been to apply sly touches such as writing letters and forging signatures of adults to cause the unquestioned sale of railroad tickets, or the unauthorized ride in the side-door Pullman.

Therefore, while the authorities were extending their circle of search based upon the velocity of modern transportation, James Holden was making his slow way across field and stream, guided by a Boy Scout compass and a U.S. Geodetic Survey map to keep him well out of the reach of roadway or town. With difficulty, but with dogged determination, he carried a light cot-blanket into which he had rolled four cans of pork and beans. He had a Boy Scout knife and a small pair of pliers to open it with. He had matches. He had the Boy Scout Handbook which was doubly useful; the pages devoted to woodsman's lore he kept for reference, the pages wasted on the qualifications for merit badges he used to start fires. He enjoyed sleeping in the open because it was spring and pleasantly warm, and because the Boy Scout Manual said that camping out was fun.

A grown man with an objective can cover thirty or forty miles per day without tiring. James made it ten to fifteen. Thus, by the time the organized search petered out for lack of evidence and manpower--try asking one question of everybody within a hundred-mile radius--James was quietly making his way, free of care, like a hardy pioneer looking for a homestead site.

The hint of kidnap went out early. The Federal Bureau of Investigation, of course, could not move until the waiting period was ended, but they did collect information and set up their organization ready to move into high speed at the instant of legal time. But then no ransom letter came; no evidence of the crime of kidnapping. This did not close the case; there were other cases on record where a child was stolen by adults for purposes other than ransom. It was not very likely that a child of six would be stolen by a neurotic adult to replace a lost infant, and Paul Brennan was personally convinced that James Holden had enough self-reliance to make such a kidnap attempt fail rather early in the game. He could hardly say so, nor could he suggest that James had indeed run away deliberately and skilfully, and with planned steps worthy of a much older person. He could only hint and urge the F.B.I. into any action that he could coerce them into taking; he did not care how or who brought James back just so long as the child was returned to his custody.

Then as the days wore into weeks with no sign, the files were placed in the inactive drawer. Paul Brennan made contact with a few private agencies.

He was stopped here, again, by another angle. The Holdens were by no means wealthy. Brennan could not justify the offer of some reward so large that people simply could not turn down the slim chance of collecting. If the missing one is heir to a couple of million dollars, the trustees can justify a reward of a good many thousand dollars for his return. The amount that Brennan was prepared to offer could not compel the services of a private agency on a full-time basis. The best and the most interested of the agencies took the case on a contingent basis; if something turned their way in the due course of their work they'd immediately take steps. Solving the case of a complete disappearance on the part of a child who virtually vanished into thin air would be good advertising, but their advertising budget would not allow them to put one man on the case without the first shred of evidence to point the way.

If Paul Brennan had been above-board, he could have evoked a lot of interest. The search for a six-year-old boy with the educational development of a youth of about eighteen, informed through the services of an electromechanical device, would have fired public interest, Government intervention, and would also have justified Paul Brennan's depth of interest. But Paul Brennan could say nothing about the excellent training, he could only hint at James Holden's mental proficiency which was backed up by the boy's school record. As it was, Paul Brennan's most frightful nightmare was one where young James was spotted by some eagle-eyed detective and then in desperation--anything being better than an enforced return to Paul Brennan--James Holden pulled out all the stops and showed everybody precisely how well educated he really was.

In his own affairs, Paul still had to make a living, which took up his time. As guardian and trustee of the Holden Estate, he was responsible to the State for his handling of James Holden's inheritance. The State takes a
sensible view of the disbursements of the inheritance of a minor. Reasonable sums may be spent on items hardly
deemed necessities to the average person, but the ceiling called “reasonable” is a flexible term and subject to close
scrutiny by the State.

In the long run it was Paul Brennan’s own indefensible position that made it impossible to prosecute a proper
search for the missing James Holden. Brennan suspected James of building up a bank account under some false
name, but he could not saunter into banks and ask to examine their records without a Court order. Brennan knew
that James had not taken off without preparation, but the examination of the stuff that James left behind was not very
informative. There was a small blanket missing and Mrs. Mitchell said that it looked as though some cans had been
removed from the stock but she could not be sure. And in a large collection of boy’s stuff, one would not observe the
absence of a Boy Scout knife and other trivia. Had a 100% inventory been available, the list of missing items would
have pointed out James Holden’s avenue of escape.

The search for an adult would have included questioning of banks. No one knows whether such a questioning
would have uncovered the bank-by-mail routine conducted under the name of Charles Maxwell. It is not a regular
thing, but the receipt of a check drawn on a New York bank, issued by a publishing company, and endorsed to be
paid to the account of so-and-so, accompanied by a request to open an account in that name might never be
connected with the manipulations of a six-year-old genius, who was overtly just plain bright.

And so Paul Brennan worried himself out of several pounds for fear that James would give himself away to the
right people. He cursed the necessity of keeping up his daily work routine. The hue-and-cry he could not keep alive,
but he knew that somewhere there was a young boy entirely capable of reconstructing the whole machine that Paul
Brennan wanted so desperately that he had killed for it.

Paul Brennan was blocked cold. With the F.B.I. maintaining a hands-off attitude because there was no trace of
any Federal crime involved, the case of James Holden was relegated to the missing-persons files. It became the
official opinion that the lad had suffered some mishap and that it would only be a matter of time before his body was
discovered. Paul Brennan could hardly prove them wrong without explaining the whole secret of James Holden’s
intelligence, competence, and the certainty that the young man would improve upon both as soon as he succeeded in
rebuilding the Holden Electromechanical Educator.

With the F.B.I. out of the picture, the local authorities waiting for the discovery of a small body, and the state
authorities shelving the case except for the routine punch-card checks, official action died. Brennan’s available
reward money was not enough to buy a private agency’s interest full-time.

Brennan could not afford to tell anybody of his suspicion of James Holden’s source of income, for the idea of a
child’s making a living by writing would be indefensible without full explanation. However, Paul Brennan resorted
to reading of magazines edited for boys. Month after month he bought them and read them, comparing the styles of
the many writers against the style of the manuscript copy left behind by James.

Brennan naturally assumed that James would use a pen name. Writers often used pen names to conceal their
own identity for any one of several reasons. A writer might use three or more pen names, each one identified with a
known style of writing, or a certain subject or established character. But Paul Brennan did not know all there was to
know about the pen-name business, such as an editor assigning a pen name to prevent the too-often appearance of
some prolific writer, or conversely to make one writer’s name seem exclusive with his magazine; nor could Brennan
know that a writer’s literary standing can be kept high by assigning a pen name to any second-rate material he may be
so unfortunate as to turn out.

Paul Brennan read many stories written by James Holden under several names, including the name of Charles
Maxwell, but Brennan’s identification according to literary style was no better than if he had tossed a coin.

And so, blocked by his own guilt and avarice from making use of the legal avenues of approach, Paul Brennan
fumed and fretted away four long years while James Holden grew from six to ten years old, hiding under the guise
of the Hermit of Martin’s Hill and behind the pleasant adult façade of Mrs. Janet Bagley.

CHAPTER TWELVE

If Paul Brennan found himself blocked in his efforts to find James Holden and the re-created Holden Educator,
James himself was annoyed by one evident fact: Everything he did resulted in spreading the news of the machine
itself.

Had he been eighteen or so, he might have made out to his own taste. In the days of late teen-age, a youth can
hold a job and rent a room, buy his own clothing and conduct himself to the limit of his ability. At ten he is suspect,
because no one will permit him to paddle his own canoe. At a later age James could have rented a small apartment
and built his machine alone. But starting as young as he did, he was forced to hide behind the cover of some adult,
and he had picked Mrs. Bagley because he could control her both through her desire for security and the promise of
a fine education for the daughter Martha Bagley.

The daughter was a two-way necessity; she provided him with a contemporary companion and also gave him a
lever to wield against the adult. A lone woman could have made her way without trouble. A lone woman with a girl-
child is up against a rather horrifying problem of providing both support and parental care. He felt that he had done
what he had to do, up to the point where Mrs. Bagley became involved with Tim Fisher or anybody else. This part of
adulthood was not yet within his grasp.

But there it was and here it is, and now there was Martha to complicate the picture. Had Mrs. Bagley been
alone, she and Tim could go off and marry and then settle down in Timbuctoo if they wanted to. But not with
Martha. She was in the same intellectual kettle of sardines as James. Her taste in education was by no means the
same. She took to the mathematical subjects indifferently, absorbing them well enough--once she could be talked
into spending the couple of hours that each day demanded--but without interest. Martha could rattle off quotations
from literary masters, she could follow the score of most operas (her voice was a bit off-key but she knew what was
going on) and she enjoyed all of the available information on keeping a house in order. Her eye and her mind were,
as James Holden's, faster than her hand. She went through the same frustrations as he did, with different tools and in
a different medium. The first offside snick of the scissors she knew to be bad before she tried the pattern for size,
and the only way she could correct such defective work was to practice and practice until her muscles were trained
enough to respond to the direction of her mind.

Remove her now and place her in a school--even the most advanced school--and she would undergo the
unhappy treatment that James had undergone these several years ago.

And yet she could not be cut loose. Martha was as much a part of this very strange life as James was. So this
meant that any revision in overall policy must necessarily include the addition of Tim Fisher and not the subtraction
of Mrs. Bagley and Martha.

"Charles Maxwell" had to go.

James's problem had not changed. His machine must be kept a secret as long as he could. The machine was his,
James Quincy Holden's property by every known and unwritten legal right of direct, single, uncluttered inheritance.
The work of his parents had been stopped by their death, but it was by no means finished with the construction of
the machine. To the contrary, the real work had only begun with the completion of the first working model. And
whether he turned out to be a machine-made genius, an over-powered dolt, or an introverted monster it was still his
own personal reason for being alive.

He alone should reap the benefit or the sorrow, and had his parents lived they would have had their right to reap
good or bad with him. Good or bad, had they lived, he would have received their protection.

As it was, he had no protection whatsoever. Until he could have and hold the right to control his own property
as he himself saw fit, he had to hide just as deep from the enemy who would steal it as he must hide from the friend
who would administrate it as a property in escrow for his own good, since he as a minor was legally unable to walk
a path both fitting and proper for his feet.

So, the facts had to be concealed. Yet all he was buying was time.

By careful juggling, he had already bought some. Months with Jake Caslow, a few months stolidly fighting the
school, and two with the help of Mrs. Bagley and Martha. Then in these later months there had been more purchased
time; time gained by the post-dated engagement and the procrastinated marriage, which was now running out.

No matter what he did, it seemed that the result was a wider spread of knowledge about the Holden
Electromechanical Educator.

So with misgiving and yet unaware of any way or means to circumvent the necessity without doing more
overall harm, James decided that Tim Fisher must be handed another piece of the secret. A plausible piece, with as
much truth as he would accept for the time being. Maybe--hand Tim Fisher a bit with great gesture and he would not

go prying for the whole?

His chance came in mid-August. It was after dinner on an evening uncluttered with party or shower or the
horde of just-dropped-in-friends of whom Tim Fisher had legion.

Janet Bagley and Tim Fisher sat on the low divan in the living room half-facing each other. Apart, but just so
far apart that they could touch with half a gesture, they were discussing the problem of domicile. They were also still
quibbling mildly about the honeymoon. Tim Fisher wanted a short, noisy one. A ten-day stay in Hawaii, flying both
ways, with a ten-hour stopover in Los Angeles on the way back. Janet Bagley wanted a long and lazy stay
somewhere no closer than fifteen hundred miles to the nearest telephone, newspaper, mailbox, airline, bus stop, or
highway. She'd take the 762-day rocket trip to Venus if they had one available. Tim was duly sympathetic to her
desire to get away from her daily grind for as long a time as possible, but he also had a garage to run, and he was by
no means incapable of pointing out the practical side of crass commercialism.

But unlike the problem of the honeymoon, which Janet Bagley was willing to discuss on any terms for the
pleasure of discussing it, the problem of domicile had been avoided--to the degree of being pointed.

For Janet Bagley was still torn between two loyalties. Hers was not a lone loyalty to James Holden, there had
been almost a complete association with the future of her daughter in the loyalty. She realized as well as James did, that Martha must not be wrested from this life and forced to live, forever an outcast, raised mentally above the level of her age and below the physical size of her mental development. Mrs. Bagley thought only of Martha's future; she gave little or no thought on the secondary part of the problem. But James knew that once Martha was separated from the establishment, she could not long conceal her advanced information, and revealing that would reveal its source.

And so, as they talked together with soft voices, James Holden decided that he could best buy time by employing logic, finance, and good common sense. He walked into the living room and sat across the coffee table from them. He said, "You'll have to live here, you know."

The abrupt statement stunned them both. Tim sat bolt upright and objected, "I'll see to it that we're properly housed, young fellow."

"This isn't charity," replied James. "Nor the goodness of my little heart. It's a necessity."

"How so?" demanded Tim crossly. "It's my life--and Janet's."

"And--Martha's life," added James.

"You don't think I'm including her out, do you?"

"No, but you're forgetting that she isn't to be popped here and there as the fancy hits you, either. She's much to be considered."

"I'll consider her," snapped Tim. "She shall be my daughter. If she will, I'll have her use my name as well as my care and affection."

"Of course you will," agreed James. The quick gesture of Mrs. Bagley's hand towards Tim, and his equally swift caress in reply were noticed but not understood by James. "But you're not thinking deeply enough about it."

"All right. You tell me all about it."

"Martha must stay here," said James. "Neither of you--nor Martha--have any idea of how stultifying it can be to be forced into school under the supervision of teachers who cannot understand, and among classmates whose grasp of any subject is no stronger than a feeble grope in the mental dawn."

"Maybe so. But that's no reason why we must run our life your way."

"You're wrong, Mr. Fisher. Think a moment. Without hesitation, you will include the education of Martha Bagley along with the 'care and affection' you mentioned a moment ago."

"Of course."

"This means, Mr. Fisher, that Martha, approaching ten years old, represents a responsibility of about seven more years prior to her graduation from high school and another four years of college--granting that Martha is a standard, normal, healthy young lady. Am I right?"

"Sure."

"Well, since you are happy and willing to take on the responsibility of eleven years of care and affection and the expense of schooling the girl, you might as well take advantage of the possibilities here and figure on five years—or less. If we cannot give her the equal of a master's degree in three, I'm shooting in the dark. Make it five, and she'll have her doctor's degree—or at least it's equivalent. Does that make sense?"

"Of course it does. But--"

"No buts until we're finished. You'll recall the tales we told you about the necessity of hiding out. It must continue. During the school year we must not be visible to the general public."

"But dammit, I don't want to set up my family in someone else's house," objected Tim Fisher.

"Buy this one," suggested James. "Then it will be yours. I'll stay on and pay rent on my section."

"You'll--now wait a minute! What are you talking about?"

"I said, I'll pay rent on my section," said James.

"But this guy upstairs--" Tim took a long breath. "Let's get this straight," he said, "now that we're on the subject, what about Mr. Charles Maxwell?"

"I can best quote," said James with a smile. "'Oh, what a tangled web we weave, when first we practice to deceive!'"

"That's Shakespeare."

"Sorry. That's Sir Walter Scott. The Lay of the Last Minstrel. Canto Six, Stanza Seventeen. The fact of the matter is that we could go on compounding this lie, but it's time to stop it. Mr. Charles Maxwell does not exist."

"I don't understand!"

"Hasn't it puzzled you that this hermit-type character that never puts a foot out of the house has been out and gone on some unstated vacation or business trip for most of the spring and summer?"

"Hadn't given it a thought," said Fisher with a fatuous look at Mrs. Bagley. She mooned back at him. For a moment they were lost in one another, giving proof to the idea that blinder than he who will not see is the fellow who has his eye on a woman.
"Charles Maxwell does not exist except in the minds of his happy readers," said James. "He is a famous writer of boys' stories and known to a lot of people for that talent. Yet he is no more a real person than Lewis Carroll."

"But Lewis Carroll did exist--"

"As Charles L. Dodgson, a mathematician famous for his work in symbolic logic."

"All right! Then who writes these stories? Who supports you--and this house?"

"I do!"

Tim blinked, looked around the room a bit wildly and then settled on Martha, looking at her helplessly.

"It's true, Tim," she said quietly. "It's crazy but it works. I've been living with it for years."

Tim considered that for a full minute. "All right," he said shortly. "So it works. But why does any kid have to live for himself?" He eyed James. "Who's responsible for you?"

"I am!"

"But--"

"Got an hour?" asked James with a smile. "Then listen--"

At the end of James Holden's long explanation, Tim Fisher said, "Me--? Now, I need a drink!"

James chuckled, "Alcoholic, of course--which is Pi to seven decimal places if you ever need it. Just count the letters."

Over his glass, Tim eyed James thoughtfully. "So if this is true, James, just who owns that fabulous machine of yours?"

"It's mine, or ours."

"You gave me to believe that it was a high-priority Government project," he said accusingly.

"Sorry. But I would lie as glibly to God Himself if it became necessary to protect myself by falsehood. I'm sorry it isn't a Government project, but it's just as important a secret."

"Anything as big as this should be the business of the Government."

"Perhaps so. But it's mine to keep or to give, and it's mine to study." James was thoughtful for a moment. "I suppose that you can argue that anything as important as this should be handed over to the authorities immediately; that a large group of men dedicated to such a study can locate its difficulties and its pitfalls and failures far swifter than a single youth of eleven. Yet by the right of invention, a process protected by the Constitution of the United States and circumvented by some very odd rulings on the part of the Supreme Court, it is mine by inheritance, to reap the exclusive rewards for my family's work. Until I'm of an age when I am deemed capable of managing my own life, I'd be 'protected' out of my rights if I handed this to anybody--including the Government. They'd start a commission full of bureaucrats who'd first use the machine to study how to best expand their own little empire, perpetuate themselves in office, and then they'd rule me out on the quaint theory that education is so important that it mustn't be wasted on the young."

Tim Fisher smiled wryly. He turned to Janet Bagley. "How do you want it?" he asked her.

"For Martha's sake, I want it his way," she said.

"All right. Then that's the way we'll have it," said Tim Fisher. He eyed James somewhat ruefully. "You know, it's a funny thing. I've always thought this was a screwy set-up, and to be honest, I've always thought you were a pretty bumptious kid. I guess you had a good reason. Anyway, I should have known Janet wouldn't have played along with it unless she had a reason that was really helping somebody."

James saw with relief that Tim had allied himself with the cause; he was, in fact, very glad to have someone knowledgeable and levelheaded in on the problem. Anyway he really liked Tim, and was happy to have the deception out of the way.

"That's all right," he said awkwardly.

Tim laughed. "Hey, will this contraption of yours teach me how to adjust a set of tappets?"

"No," said James quickly. "It will teach you the theory of how to chop down a tree but it can't show you how to swing an axe. Or," he went on with a smile, "it will teach you how to be an efficient accountant--but you have to use your own money!"

* * * * *

In the house on Martin's Hill, everybody won. Tim Fisher objected at first to the idea of gallivanting off on a protracted honeymoon, leaving a nine-year-old daughter in the care of a ten-year-old boy. But Janet--now Mrs. Fisher--pointed out that James and Martha were both quite competent, and furthermore there was little to be said for a honeymoon encumbered with a little pitcher that had such big ears, to say nothing of a pair of extremely curious eyes and a rather loud voice. And furthermore, if we allow the woman's privilege of adding one furthermore on top of another, it had been a long, long time since Janet had enjoyed a child-free vacation. So she won. It was not Hawaii by air for a ten-day stay. It was Hawaii by ship with a sixty-day sojourn in a hotel that offered both seclusion and company to the guests' immediate preference.
James Holden won more time. He felt that every hour was a victory. At times he despaired because time passed so crawlingly slow. All the wealth of his education could not diminish that odd sense of the time-factor that convinces all people that the length of the years diminish as age increases. Far from being a simple, amusing remark, the problem has been studied because it is universal. It is psychological, of course, and it is not hard to explain simply in terms of human experience plus the known fact that the human senses respond to the logarithm of the stimulus.

With most people, time is reasonably important. We live by the clock, and we die by the clock, and before there were clocks there were candles marked in lengths and sand flowing through narrow orifices, water dripping into jars, and posts stuck in the ground with marks for the shadow to divide the day. The ancient ones related womanhood to the moon and understood that time was vital in the course of Life.

With James, time was more important, perhaps, than to any other human being alive. He was fighting for time, always. His was not the immature desire of uneducated youth to become adult overnight for vague reasons.

With James it was an honest evaluation of his precarious position. He had to hide until he was deemed capable of handling his own affairs, after which he could fight his own battles in his own way without the interference of the laws that are set up to protect the immature.

With Tim Fisher and his brand-new bride out of the way, James took a deep breath at having leaped one more hurdle. Then he sat down to think.

Obviously there is no great sea-change that takes place at the Stroke Of Midnight on the date of the person's 21st birthday; no magic wand is waved over his scalp to convert him in a moment of time from a puling infant to a mature adult. The growth of child to adult is as gradual as the increase of his stature, which varies from one child to the next.

The fact remained that few people are confronted by the necessity of making a decision based upon the precise age of the subject. We usually cross this barrier with no trouble, taking on our rights and responsibilities as we find them necessary to our life. Only in probating an estate left by the demise of both parents in the presence of minor children does this legal matter of precise age become noticeable. Even then, the control exerted over the minor by the legal guardian diminishes by some obscure mathematical proportion that approaches zero as the minor approaches the legal age of maturity. Rare is the case of the reluctant guardian who jealously relinquishes the iron rule only after the proper litigation directs him to let go, render the accounting for audit, and turn over the keys to the treasury to the rightful heir.

James Holden was the seldom case. James Holden needed a very adroit lawyer to tell him how and when his rights and privileges as a citizen could be granted, and under what circumstances. From the evidence already at hand, James saw loopholes available in the matter of the legal age of twenty-one. But he also knew that he could not approach a lawyer with questions without giving full explanation of every why and wherefore.

So James Holden, already quite competent in the do-it-himself method of cutting his own ice, decided to study law. Without any forewarning of the monumental proportions of the task he faced, James started to acquire books on legal procedure and the law.

** * * * * **

With the return of Tim and Janet Fisher matters progressed well. Mrs. Fisher took over the running of the household; Tim continued his running of the garage and started to dicker for the purchase of the house on Martin's Hill. The "Hermit" who had returned before the wedding remained temporarily. With a long-drawn plan, Charles Maxwell would slowly fade out of sight. Already his absence during the summer was hinting as being a medical study; during the winter he would return to the distant hospital. Later he would leave completely cured to take up residence elsewhere. Beyond this they planned to play it by ear.

James and Martha, freed from the housework routine, went deep into study. Christmas passed and spring came and in April, James marked his eleventh birthday.

CHAPTER THIRTEEN

One important item continued to elude James Holden. The Educator could not be made to work in "tandem." In less technical terms, the Educator was strictly an individual device, a one-man-dog. The wave forms that could be recorded were as individual as fingerprints and pore-patterns and iris markings. James could record a series of ideas or a few pages of information and play them back to himself. During the playback he could think in no other terms; he could not even correct, edit or improve the phrasing. It came back word for word with the faithful reproduction of absolute fidelity. Similarly, Martha could record a phase of information and she, too, underwent the same repetition when her recording was played back to her.

But if Martha's recording were played through to James, utter confusion came. It was a whirling maze of colors and odors, sound, taste and touch.

It spoiled some of James Holden's hopes; he sought the way to mass-use, his plan was to employ a teacher to
digest the information and then via the Educator, impress the information upon many other brains each coupled to
the machine. This would not work.

He made an extra headset late in June and they tried it, sitting side-by-side and still it did not work. With
Martha doing the reading, she got the full benefit of the machine and James emerged with a whirling head full of
riotous colors and other sensations. At one point he hoped that they might learn some subject by sitting side-by-side
and reading the text in unison, but from this they received the information horribly mingled with equal intensity of
sensory noise.

He did not abandon this hope completely. He merely put it aside as a problem that he was not ready to study
yet. He would re-open the question when he knew more about the whole process. To know the whole process meant
studying many fields of knowledge and combining them into a research of his own.

And so James entered the summer months as he'd entered them before; Tim and Janet Fisher took off one day
and returned the next afternoon with a great gay show of "bringing the children home for the summer."

Even in this day of multi-billion-dollar budgets and farm surpluses that cost forty thousand dollars per hour for
warehouse rental, twenty-five hundred dollars is still a tidy sum to dangle before the eyes of any individual. This
was the reward offered by Paul Brennan for any information as to the whereabouts of James Quincy Holden.

If Paul Brennan could have been honest, the information he could have supplied would have provided any of
the better agencies with enough lead-material to track James Holden down in a time short enough to make the
reward money worth the effort. Similarly, if James Holden's competence had been no greater than Brennan's scaled-
down description, he could not have made his own way without being discovered.

Bound by his own guilt, Brennan could only fret. Everything including time, was running against him.

And as the years of James Holden's independence looked toward the sixth, Paul Brennan was willing to make a
mental bet that the young man's education was deeper than ever.

He would have won. James was close to his dream of making his play for an appearance in court and pleading
for the law to recognize his competence to act as an adult. He abandoned all pretense; he no longer hid through the
winter months, and he did not keep Martha under cover either. They went shopping with Mrs. Fisher now and then,
and if any of the folks in Shipmont wondered about them, the fact that the children were in the care and keeping of
responsible adults and were oh-so-quick on the uptake stopped anybody who might have made a fast call to the
truant officer.

Then in the spring of James Holden's twelfth year and the sixth of his freedom, he said to Tim Fisher. "How
would you like to collect twenty-five hundred dollars?"

"Fisher grinned. "Who do you want killed?"
"Seriously."
"Who wouldn't?"
"All right, drop the word to Paul Brennan and collect the reward."
"Can you protect yourself?"
"I can quote Gladstone from one end to the other. I can cite every civil suit regarding the majority or minority
problem that has any importance. If I fail, I'll skin out of there in a hurry on the next train. But I can't wait forever."
"What's the gimmick, James?"
"First, I am sick and tired of running and hiding, and I think I've got enough to prove my point and establish my
rights. Second, there is a bit of cupidity here; the reward money is being offered out of my own inheritance so I feel
that I should have some say in where it should go. Third, the fact that I steer it into the hands of someone I'd prefer
to get it tickles my sense of humor. The trapper trapped; the bopper bopped; the sapper hoist by his own petard."
"And--?"
"It isn't fair to Martha, either. So the sooner we get this whole affair settled, the sooner we can start to move
towards a reasonable way of life."
"Okay, but how are we going to work it? I can't very well turn up by myself, you know."
"Why not?"
"People would think I'm a heel."
"Let them think so. They'll change their opinion once the whole truth is known." James smiled. "It'll also let
you know who your true friends are."
"Okay. Twenty-five hundred bucks and a chance at the last laugh sounds good. I'll talk it over with Janet."

That night they buried Charles Maxwell, the Hermit of Martin's Hill.

BOOK THREE:
THE REBEL
CHAPTER FOURTEEN
In his years of searching, Paul Brennan had followed eleven fruitless leads. It had cost him over thirteen
hundred dollars and he was prepared to go on and on until he located James Holden, no matter how much it took. He fretted under two fears, one that James had indeed suffered a mishap, and the other that James might reveal his secret in a dramatic announcement, or be discovered by some force or agency that would place the whole process in hands that Paul Brennan could not reach.

The registered letter from Tim Fisher culminated this six years of frantic search. Unlike the previous leads, this spoke with authority, named names, gave dates, and outlined sketchily but adequately the operations of the young man in very plausible prose. Then the letter went on in the manner of a man with his foot in a cleft stick; the writer did not approve of James Holden's operations since they involved his wife and newly-adopted daughter, but since wife and daughter were fond of James Holden, the writer could not make any overt move to rid his household of the interfering young man. Paul Brennan was asked to move with caution and in utter secrecy, even to sending the reward in cash to a special post-office box.

Paul Brennan's reaction was a disappointment to himself. He neither felt great relief nor the desire to exult. He found himself assaying his own calmness and wondering why he lacked emotion over this culmination of so many years of futile effort. He re-read the letter carefully to see if there were something hidden in the words that his subconscious had caught, but he found nothing that gave him any reason to believe that this letter was a false lead. It rang true; Brennan could understand Tim Fisher's stated reaction and the man's desire to collect. Brennan even suspected that Fisher might use the reward money for his own private purpose.

It was not until he read the letter for the third time that he saw the suggestion to move with caution and secrecy not as its stated request to protect the writer, but as an excellent advice for his own guidance.

And then Paul Brennan realized that for six years he had been concentrating upon the single problem of having James Holden returned to his custody, and in that concentration he had lost sight of the more important problem of achieving his true purpose of gaining control of the Holden Educator. The letter had not been the end of a long quest, but just the signal to start.

Paul Brennan of course did not give a fig for the Holden Estate nor the welfare of James. His only interest was in the machine, and the secret of that machine was locked in the young man's mind and would stay that way unless James could be coerced into revealing it. The secret indubitably existed as hardware in the machine rebuilt in the house on Martin's Hill, but Brennan guessed that any sight of him would cause James to repeat his job of destruction. Brennan also envisioned a self-destructive device that would addele the heart of the machine at the touch of a button, perhaps booby-traps fitted like burglar alarms that would ruin the machine at the first touch of an untrained hand.

Brennan's mind began to work. He must plan his moves carefully to acquire the machine by stealth. He toyed with the idea of murder and rejected it as too dangerous to chance a repeat, especially in view of the existence of the rebuilt machine.

Brennan read the letter again. It gave him to think. James had obviously succeeded in keeping his secret by imparting it to a few people that he could either trust or bind to him, perhaps with the offer of education via the machine, which James and only James maintained in hiding could provide. Brennan could not estimate the extent of James Holden's knowledge but it was obvious that he was capable of some extremely intelligent planning. He was willing to grant the boy the likelihood of being the equal of a long and experienced campaigner, and the fact that James was in the favor of Tim Fisher's wife and daughter meant that the lad would be able to call upon them for additional advice. Brennan counted the daughter Martha in this planning program, most certainly James would have given the girl an extensive education, too. Everything added up, even to Tim Fisher's resentment.

But there was not time to ponder over the efficiency of James Holden's operations. It was time for Paul Brennan to cope, and it seemed sensible to face the fact that Paul Brennan alone could not plot the illegal grab of the Holden Educator and at the same time masquerade as the deeply-concerned loving guardian. He could label James Holden's little group as an organization, and if he was to combat this organization he needed one himself.

Paul Brennan began to form a mental outline of his requirements. First he had to figure out the angle at which to make his attack. Once he knew the legal angle, then he could find ruthless men in the proper position of authority whose ambitions he could control. He regretted that the elder Holden had not allowed him to study civil and criminal law along with his courses in real estate and corporate law. As it was, Brennan was unsure of his legal rights, and he could not plan until he had researched the problem most thoroughly.

To his complete surprise, Paul Brennan discovered that there was no law that would stay an infant from picking up his marbles and leaving home. So long as the minor did not become a ward of responsibility of the State, his freedom was as inviolable as the freedom of any adult. The universal interest in missing-persons cases is overdrawn because of their dramatic appeal. In every case that comes to important notice, the missing person has left some important responsibilities that had to be satisfied. A person with no moral, legal, or ethical anchor has every right to pack his suitcase and catch the next conveyance for parts unknown. If he is found by the authorities after an appeal
by friends or relatives, the missing party can tell the police that, Yes he did leave home and, No he isn't returning and, furthermore he does not wish his whereabouts made known; and all the authorities can report is that the missing one is hale, happy, and hearty and wants to stay missing.

Under the law, a minor is a minor and there is no proposition that divides one degree of minority from another. Major decisions, such as voting, the signing of binding contracts of importance, the determination of a course of drastic medical treatment, are deemed to be matters that require mature judgment. The age for such decisions is arbitrarily set at age twenty-one. Acts such as driving a car, sawing a plank, or buying food and clothing are considered to be "skills" that do not require judgment and therefore the age of demarcation varies with the state and the state legislature's attitude.

James was a minor; presumably he could repudiate contracts signed while a minor, at the time he reached the age of twenty-one. From a practical standpoint, however, anything that James contracted for was expendable and of vital necessity. He could not stop payment on a check for his rent, nor claim that he had not received proper payment for his stories and demand damages. Paul Brennan might possibly interfere with the smooth operation by squawking to the bank that Charles Maxwell was a phantom front for the minor child James Holden. And bankers, being bankers, might very well clog up the operation with a lot of questions. But there was the possibility that James Holden, operating through the agency of an adult, would switch his method. He could even go so far as to bring Brennan to lawsuit to have Brennan stopped from his interference. Child or not, James Holden had been running a checking account by mail for a number of years which could be used as evidence of his good faith and ability.

Indeed, the position of James Holden was so solid that Brennan could only plead personal interest and personal responsibility in the case for securing a writ of habeas corpus to have the person of James Holden returned to his custody and protection. And this of itself was a bit on the dangerous side. A writ of habeas corpus will, by law, cause the delivery of the person to the right hands, but there is no part of the writ that can be used to guarantee that the person will remain thereafter. If Brennan tried to repeat this program, James Holden was very apt to suggest either the rather rare case of Barratry or Maintenance against Brennan. Barratry consists of the constant harassment of a citizen by the serial entry of lawsuit after lawsuit against him, each of which he must defend to the loss of time and money—and the tying up of courts and their officials. Maintenance is the re-opening of the same suit and its charges time after time in court after court. One need only be sure of the attitude of the plaintiff to strike back; if he is interested in heckling the defendant and this can be demonstrated in evidence, the heckler is a dead duck. Such a response would surely damage Paul Brennan's overt position as a responsible, interested, affectionate guardian of his best friends' orphaned child.

Then to put the top on the bottle, James Holden had crossed state lines in his flight from home. This meant that the case was not the simple proposition of appearing before a local magistrate and filing an emotional appeal. It was interstate. It smacked of extradition, and James Holden had committed no crime in either state.

To Paul Brennan's qualifications for his henchmen, he now added the need for flouting the law if the law could not be warped to fit his need.

Finding a man with ambition, with a casual disregard for ethics, is not hard in political circles. Paul Brennan found his man in Frank Manison, a rising figure in the office of the District Attorney. Manison had gubernatorial ambitions, and he was politically sharp. He personally conducted only those cases that would give him ironclad publicity; he preferred to lower the boom on a lighter charge than chance an acquittal. Manison also had a fine feeling for anticipating public trends, a sense of the drama, and an understanding of public opinion.

He granted Brennan a conference of ten minutes, and knowing from long experience that incoming information flows faster when it is not interrupted, he listened attentively, oiling and urging the flow by facial expressions of interest and by leaning forward attentively whenever a serious point was about to come forth. Brennan explained about James Holden, his superior education, and what it had enabled the lad to do. He explained the education not as a machine but as a "system of study" devised by James Holden's parents, feeling that it was better to leave a few stones lying flat and unturned for his own protection. Manison nodded at the end of the ten-minute time-limit, used his desk interphone to inform his secretary that he was not to be disturbed until further notice (which also told Paul Brennan that he was indeed interested) and then said:

"You know you haven't a legal leg to stand on, Brennan."

"So I find out. It seems incredible that there isn't any law set up to control the activity of a child."

"Incredible? No, Brennan, not so. To now it hasn't been necessary. People just do not see the necessity of laws passed to prevent something that isn't being done anyway. The number of outmoded laws, ridiculous laws, and laws passed in the heat of public emotion are always a subject for public ridicule. If the state legislature were to pass a law stating that any child under fourteen may not leave home without the consent of his parents, every opposition newspaper in the state would howl about the waste of time and money spent on ridiculous legislation passed to govern activities that are already under excellent control. They would poll the state and point out that for so many
million children under age fourteen, precisely zero of them have left home to set up their own housekeeping. One might just as well waste the taxpayer's money by passing a law that confirms the Universal Law of Gravity.

"But that's neither here nor there," he said. "Your problem is to figure out some means of exerting the proper control over this intelligent infant."

"My problem rises higher than that," said Brennan ruefully. "He dislikes me to the point of blind, unreasonable hatred. He believes that I am the party responsible for the death of his parents and furthermore that the act was deliberate. Tantamount to a charge of first-degree murder."

"Has he made that statement recently?" asked Manison.

"I would hardly know."

"When last did you hear him say words to that effect?"

"At the time, following the accidental death of his parents, James Holden ran off to the home of his grandparents. Puzzled and concerned, they called me as the child's guardian. I went there to bring him back to his home. I arrived the following morning and it was during that session that James Holden made the accusation."

"And he has not made it since, to the best of your knowledge?"

"Not that I know of."

"Hardly make anything out of that. Seven years ago. Not a formal charge, only a cry of rage, frustration, hysterical grief. The complaint of a five-year-old made under strain could hardly be considered slanderous. It is too bad that the child hasn't broken any laws. Your success in collecting him the first time was entirely due to the associations he'd made with this automobile thief--Caslow, you said his name was. We can't go back to that. The responsibility has been fixed, I presume, upon Jake Caslow in another state. Brennan, you've a real problem: How can you be sure that this James Holden will disclose his secret system of study even if we do succeed in cooking up some legal means of placing him and keep him in your custody?"

Brennan considered, and came to the conclusion that now was the time to let another snibbet of information go.

"The system of study consists of an electronic device, the exact nature of which I do not understand. The entire machine is large and cumbersome. In it, as a sort of 'heart,' is a special circuit. Without this special circuit the thing is no more than an expensive aggregation of delicate devices that could be used elsewhere in electronics. One such machine stands unused in the Holden Home because the central circuit was destroyed beyond repair or replacement by young James Holden. He destroyed it because he felt that this secret should remain his own, the intellectual inheritance from his parents. There is one other machine--undoubtedly in full function and employed daily--in the house on Martin's Hill under James Holden's personal supervision."

"Indeed? How, may I ask?"

"It was rebuilt by James Holden from plans, specifications, and information engraved on his brain by his parents through the use of their first machine. Unfortunately, I have every reason to believe that this new machine is so booby-trapped and tamper-protected that the first interference by someone other than James Holden will cause its destruction."

"Um. It might be possible to impound this machine as a device of high interest to the State," mused Manison. "But if we start any proceeding as delicate as that, it will hit every newspaper in the country and our advantage will be lost."

"Technically," said Paul Brennan, "you don't know that such a machine exists. But as soon as young Holden realizes that you know about his machine, he'll also know that you got the information from me." Brennan sat quietly and thought for a moment. "There's another distressing angle, too," he said at last. "I don't think that there is a soul on earth who knows how to run this machine but James Holden. Steal it or impound it or take it away legally, you've got to know how it runs. I doubt that we'd find a half-dozen people on the earth who'd willingly sit in a chair with a heavy headset on, connected to a devilish aggregation of electrical machinery purported to educate the victim, while a number of fumblers experimented with the dials and the knobs and the switches. No sir, some sort of pressure must be brought to bear upon the youngster."

"Um. Perhaps civic pride? Might work. Point out to him that he is in control of a device that is essential to the security of the United States. That he is denying the children of this country the right to their extensive education. Et cetera?"

"Could be. But how are you going to swing it, technically in ignorance of the existence of such a machine?"

"Were I a member of the Congressional Committee on Education, I could investigate the matter of James Holden's apparent superiority of intellect."

"And hit Page One of every newspaper in the country," sneered Brennan.

"Well, I'm not," snapped Manison angrily. "However, there is a way, perhaps several ways, once we find the first entering wedge. After all, Brennan, the existence of a method of accelerating the course of educational training is of the utmost importance to the future of not only the United States of America, but the entire human race. Once I
can locate some plausible reason for asking James Holden the first question about anything, the remainder of any session can be so slanted as to bring into the open any secret knowledge he may have. We, to make the disclosure easier, shall hold any sessions in the strictest of secrecy. We can quite readily agree with James Holden's concern over the long-range effectiveness of his machine and state that secrecy is necessary lest headstrong factions take the plunge into something that could be very detrimental to the human race instead of beneficial. Frankly, Mr. Brennan," said Manison with a wry smile, "I should like to borrow that device for about a week myself. It might help me locate some of the little legal points that would help me." He sighed. "Yes," he said sadly, "I know the law, but no one man knows all of the finer points. Lord knows," he went on, "if the law were a simple matter of behaving as it states, we'd not have this tremendous burden. But the law is subject to interpretation and change and argument and precedent--Precedent? Um, here we may have an interesting angle, Brennan. I must look into it."

"Precedent?"

"Yes, indeed. Any ruling that we were to make covering the right of a seven, eight, or nine year old to run his own life as he sees fit will be a ruling that establishes precedent."

"And--?"

"Well, up to now there's no ruling about such a case; no child of ten has ever left home to live as he prefers. But this James Holden is apparently capable of doing just that--and any impartial judge deliberating such a case would find it difficult to justify a decision that placed the competent infant under the guardianship and protection of an adult who is less competent than the infant."

Brennan's face turned dark. "You're saying that this Holden kid is smarter than I am?"

"Sit down and stop sputtering," snapped Manison. "What were you doing at six years old, Brennan? Did you have the brains to leave home and protect yourself by cooking up the plausible front of a very interesting character such as the mythical Hermit of Martin's Hill? Were you writing boys' stories for a nationwide magazine of high circulation and accredited quality? Could you have planned your own dinner and prepared it, or would you have dined on chocolate bars washed down with strawberry pop? Stop acting indignant. Start thinking. If for no other reason than that we don't want to end up selling pencils on Halstead Street because we're not quite bright, we've got to lay our hands on that machine. We've got to lead, not follow. Yet at the present time I'll wager that your James Holden is going to give everybody concerned a very rough time. Now, let me figure out the angles and pull the wires. One thing that nobody can learn from any electronic machine is how to manipulate the component people that comprise a political machine. I'll be in touch with you, Brennan."

* * * * *

The ring at the door was Chief of Police Joseph Colling and another gentleman. Janet Fisher answered the door, "Good evening, Mr. Colling. Come in?"

"Thank you," said Colling politely. "This is Mr. Frank Manison, from the office of the State Department of Justice."

"Oh? Is something wrong?"

"Not that we know of," replied Manison. "We're simply after some information. I apologize for calling at eight o'clock in the evening, but I wanted to catch you all under one roof. Is Mr. Fisher home? And the children?"

"Why, yes. We're all here," Janet stepped aside to let them enter the living room, and then called upstairs. Mr. Manison was introduced around and Tim Fisher said, cautiously, "What's the trouble here?"

"No trouble that we know of," said Manison affably. "We're just after some information about the education of James Holden, a legal minor, who seems never to have been enrolled in any school."

"If you don't mind," replied Tim Fisher, "I'll not answer anything without the advice of my attorney."

Janet Fisher gasped.

Tim turned with a smile. "Don't you like lawyers, honey?"

"It isn't that. But isn't crying for a lawyer an admission of some sort?"

"Sure is," replied Tim Fisher. "It's an admission that I don't know all of my legal rights. If lawyers come to me because they don't know all there is to know about the guts of an automobile, I have every right to the same sort of consultation in reverse. Agree, James?"

James Holden nodded. "The man who represents himself in court has a fool for a client," he said. "I think that's Daniel Webster, but I'm not certain. No matter; it's right. Call Mr. Waterman, and until he arrives we'll discuss the weather, the latest dope in high-altitude research, or nuclear physics."

Frank Manison eyed the lad. "You're James Holden?"

"I am."

Tim interrupted. "We're not answering anything," he warned.

"Oh, I don't mind admitting my identity," said James. "I've committed no crime, I've broken no law. No one can point to a single act of mine that shows a shred of evidence to the effect that my intentions are not honorable. Sooner
or later this whole affair had to come to a showdown, and I'm prepared to face it squarely."

"Thank you," said Manison. "Now, without inviting comment, let me explain one important fact. The state reserves the right to record marriages, births, and deaths as a simple matter of vital statistics. We feel that we have every right to the compiling of the census, and we can justify our feeling. I am here because of some apparent irregularities, records of which we do not have. If these apparent irregularities can be explained to our satisfaction for the record, this meeting will be ended. Now, let's relax until your attorney arrives."

"May I get you some coffee or a highball?" asked Janet Fisher.

"Coffee, please," agreed Frank Manison. Chief Colling nodded quietly. They relaxed over coffee and small talk for a half hour. The arrival of Waterman, Tim Fisher's attorney, signalled the opening of the discussion.

"First," said Manison, his pencil poised over a notebook, "Who lives here in permanent residence, and for how long?" He wrote rapidly as they told him. "The house is your property?" he asked Tim, and wrote again. "And you are paying a rental on certain rooms of this house?" he asked James, who nodded.

"Where did you attend school?" he asked James.

"I did not."

"Where did you get your education?"

"By a special course in home study."

"You understand that under the state laws that provide for the education of minor children, the curriculum must be approved by the state?"

"I do."

"And has it?"

Waterman interrupted. "Just a moment, Mr. Manison. In what way must the curriculum be approved? Does the State study all textbooks and the manner in which each and every school presents them? Or does the State merely insist that the school child be taught certain subjects?"

"The State merely insists that certain standards of education be observed."

"In fact," added James, "the State does not even insist that the child learn the subjects, realizing that some children lack the intellect to be taught certain subjects completely and fully. Let's rather say that the State demands that school children be exposed to certain subjects in the hope that they 'take.' Am I not correct?"

"I presume you are."

"Then I shall answer your question. In my home study, I have indeed followed the approved curriculum by making use of the approved textbooks in their proper order. I am aware of the fact that this is not the same State, but if you will consult the record of my earlier years in attendance at a school selected by my legal guardian, you'll find that I passed from preschool grade to Fourth Grade in a matter of less than half a year, at the age of five-approaching-six. If this matter is subject to question, I'll submit to any course of extensive examination your educators care to prepare. The law regarding compulsory education in this state says that the minor child must attend school until either the age of eighteen, or until he has completed the standard eight years of grammar school and four years of high school. I shall then stipulate that the suggested examination be limited to the schooling of a high school graduate."

"For the moment we'll pass this over. We may ask that you do prove your contention," said Manison.

"You don't doubt that I can, do you?" asked James.

Manison shook his head. "No, at this moment I have no doubt."

"Then why do you bother asking?"

"I am here for a rather odd reason," said Manison. "I've told you the reservations that the State holds, which justify my presence. Now, it is patently obvious that you are a very competent young man, James Holden. The matter of making your own way is difficult, as many adults can testify. To have contrived a means of covering up your youth, in addition to living a full and competent life, demonstrates an ability above and beyond the average. Now, the State is naturally interested in anything that smacks of acceleration of the educational period. Can you understand that?"

"Naturally. None but a dolt would avoid education."

"Then you agree with our interest?"

"I--"

"Just a moment, James," said Waterman. "Let's put it that you understand their interest, but that you do not necessarily agree."

"I understand," said James.

"Then you must also understand that this 'course of study' by which you claim the equal of a high-school education at the age of ten or eleven (perhaps earlier) must be of high importance."

"I understand that it might," agreed James.
"Then will you explain why you have kept this a secret?"

"Because--"

"Just a moment," said Waterman again. "James, would you say that your method of educating yourself is completely perfected?"

"Not completely."

"Not perfected?" asked Manison. "Yet you claim to have the education of a high-school graduate?"

"I so claim," said James. "But I must also point out that I have acquired a lot of mish-mash in the course of this education. For instance, it is one thing to study English, its composition, spelling, vocabulary, construction, rules and regulations. One must learn these things if he is to be considered literate. In the course of such study, one also becomes acquainted with English literature. With literature it is enough to merely be acquainted with the subject. One need not know the works of Chaucer or Spenser intimately--unless one is preparing to specialize in the English literature of the writers of that era. Frankly, sir, I should hate to have my speech colored by the flowery phrases of that time, and the spelling of that day would flunk me out of First Grade if I made use of it. In simple words, I am still perfecting the method."

"Now, James," went on Waterman, "have you ever entertained the idea of not releasing the details of your method?"

"Occasionally," admitted James.

"Why?"

"Until we know everything about it, we can not be certain that its ultimate effect will be wholly beneficial."

"So, you see," said Waterman to Manison, "the intention is reasonable. Furthermore, we must point out that this system is indeed the invention created by the labor and study of the parents of James Holden, and as such it is a valuable property retained by James Holden as his own by the right of inheritance. The patent laws of the United States are clear, it is the many conflicting rulings that have weakened the system. The law itself is contained in the Constitution of the United States, which provides for the establishment of a Patent Office as a means to encourage inventors by granting them the exclusive right to the benefits of their labor for a reasonable period of time--namely seventeen years with provision for a second period under renewal."

"Then why doesn't he make use of it?" demanded Manison.

"Because the process, like so many another process, can be copied and used by individuals without payment, and because there hasn't been a patent suit upheld for about forty years, with the possible exception of Major Armstrong's suit against the Radio Corporation of America, settled in Armstrong's favor after about twenty-five years of expensive litigation. A secret is no longer a secret these days, once it has been written on a piece of paper and called to the attention of a few million people across the country."

"You realize that anything that will give an extensive education at an early age is vital to the security of the country."

"We recognize that responsibility, sir," said Waterman quietly. "We also recognize that in the hands of unscrupulous men, the system could be misused. We also realize its dangers, and we are trying to avoid them before we make the announcement. We are very much aware of the important, although unfortunate, fact that James Holden, as a minor, can have his rights abridged. Normally honest men, interested in the protection of youth, could easily prevent him from using his own methods, thus depriving him of the benefits that are legally his. This could be done under the guise of protection, and the result would be the super-education of the protectors--whose improving intellectual competence would only teach them more and better reasons for depriving the young man of his rights. James Holden has a secret, and he has a right to keep that secret, and his only protection is for him to continue to keep that secret inviolate. It was his parents' determination not to release this process upon the world until they were certain of the results. James is a living example of their effort; they conceived him for the express purpose of providing a virgin mind to educate by their methods, so that no outside interference would becloud their results. If this can be construed as the illegal experimentation on animals under the anti-vivisection laws, or cruelty to children, it was their act, not his. Is that clear?"

"It is clear," replied Manison. "We may be back for more discussion on this point. I'm really after information, not conducting a case, you know."

"Well, you have your information."

"Not entirely. We've another point to consider, Mr. Waterman. It is admittedly a delicate point. It is the matter of legal precedent. Granting everything you say is true--and I'll grant that hypothetically for the purpose of this argument--let's assume that James Holden ultimately finds his process suitable for public use. Now, happily to this date James had not broken any laws. He is an honorable individual. Let's now suppose that in the near future, someone becomes educated by his process and at the age of twelve or so decided to make use of his advanced intelligence in nefarious work?"
"All right. Let's suppose."
"Then you tell me who is responsible for the person of James Holden?"
"He is responsible unto himself."
"Not under the existing laws," said Manison. "Let's consider James just as we know him now. Who says, 'go ahead,' if he has an attack of acute appendicitis?"
"In the absence of someone to take the personal responsibility," said James quietly, "the attending doctor would toss his coin to see whether his Oath of Hippocrates was stronger than his fear of legal reprisals. It's been done before. But let's get to the point, Mr. Manison. What do you have in mind?"
"You've rather pointedly demonstrated your preference to live here rather than with your legally-appointed guardian."
"Yes."
"Well, young man, I suggest that we get this matter settled legally. You are not living under the supervision of your guardian, but you are indeed living under the auspices of people who are not recognized by law as holding the responsibility for you."
"So far there's been no cause for complaint."
"Let's keep it that way," smiled Manison. "I'll ask you to accept a writ of habeas corpus, directing you to show just cause why you should not be returned to the custody of your guardian."
"And what good will that do?"
"If you can show just cause," said Manison, "the Court will follow established precedent and appoint Mr. and Mrs. Fisher as your responsible legal guardians—if that is your desire."
"Can this be done?" asked Mrs. Fisher.
"It's been done before, time and again. The State is concerned primarily with the welfare of the child; children have been legally removed from natural but unsuitable parents, you know." He looked distressed for a moment and then went on, "The will of the deceased is respected, but the law recognizes that it is the living with which it must be primarily concerned, that mistakes can be made, and that such errors in judgment must be rectified in the name of the public weal."
"I've been--" started James but Attorney Waterman interrupted him:
"We'll accept the service of your writ, Mr. Manison."
"Never give the opposition an inkling of what you have in mind—and always treat anybody who is not in your retainer as opposition."

CHAPTER FIFTEEN

The case of Brennan vs. Holden opened in the emptied court room of Judge Norman L. Carter, with a couple of bored members of the press wishing they were elsewhere. For the first two hours, it was no more than formalized outlining of the whole situation.

The plaintiff identified himself, testified that he was indeed the legal guardian of the minor James Quincy Holden, entered a transcript of the will in evidence, and then went on to make his case. He had provided a home atmosphere that was, to the best of his knowledge, the type of home atmosphere that would have been highly pleasing to the deceased parents—especially in view of the fact that this home was one and the same house as theirs and that little had been changed. He was supported by the Mitchells. It all went off in the slow, cumbersome dry phraseology of the legal profession and the sum and substance of two hours of back-and-forth question-and-answer was to establish the fact that Paul Brennan had provided a suitable home for the minor, James Quincy Holden, and that the minor James Quincy Holden had refused to live in it and had indeed demonstrated his objections by repeatedly absenting himself wilfully and with premeditation.

The next half hour covered a blow-by-blow account of Paul Brennan's efforts to have the minor restored to him. The attorneys for both sides were alert. Brennan's counsel did not even object when Waterman paved the way to show why James Holden wanted his freedom by asking Brennan:
"Were you aware that James Holden was a child of exceptional intellect?"
"Yes."
"And you've testified that when you moved into the Holden home, you found things as the Holdens had provided them for their child?"
"Yes."
"In your opinion, were these surroundings suitable for James Holden?"
"They were far too advanced for a child of five."
"I asked specifically about James Holden."
"James Holden was five years old."

Waterman eyed Brennan with some surprise, then cast a glance at Frank Manison, who sat at ease, calmly
watching and listening with no sign of objection. Waterman turned back to Brennan and said, "Let's take one more turn around Robin Hood's Barn, Mr. Brennan. First, James Holden was an exceptional child?"

"Yes."
"And the nature of his toys and furnishings?"
"In my opinion, too advanced for a child of five."
"But were they suitable for James Holden?"
"James Holden was a child of five."

Waterman faced Judge Carter. "Your Honor," he said, "I submit that the witness is evasive. Will you direct him to respond to my direct question with a direct answer?"

"The witness will answer the question properly," said Judge Carter with a slight frown of puzzlement, "unless counsel for the witness has some plausible objection?"

"No objection," said Manison.
"Please repeat or rephrase your question," suggested Judge Carter.

"Mr. Brennan," said Waterman, "you've testified that James was an exceptional child, advanced beyond his years. You've testified that the home and surroundings provided by James Holden's parents reflected this fact. Now tell me, were the toys, surroundings, and the home suitable for James Holden?"

"In my opinion, no."
"And subsequently you replaced them with stuff you believed more suitable for a child of five, is that it?"
"Yes. I did, and you are correct."
"To which he objected?"
"To which James Holden objected."
"And what was your response to his objection?"
"I overruled his objection."
"Upon what grounds?"
"Upon the grounds that the education and the experience of an adult carries more wisdom than the desires of a child."

"Now, Mr. Brennan, please listen carefully. During the months following your guardianship, you successively removed the books that James Holden was fond of reading, replaced his advanced Meccano set with a set of modular blocks, exchanged his oil-painting equipment for a child's coloring books and standard crayolas, and in general you removed everything interesting to a child with known superiority of intellect?"

"I did."
"And your purpose in opening this hearing was to convince this Court that James Holden should be returned by legal procedure to such surroundings?"

"It is."
"No more questions," said Waterman. He sat down and rubbed his forehead with the palm of his right hand, trying to think.

Manison said, "I have one question to ask of Janet Fisher, known formerly as Mrs. Bagley."
Janet Fisher was sworn and properly identified.

"Now, Mrs. Fisher, prior to your marriage to Mr. Fisher and during your sojourn with James Holden in the House on Martin's Hill, did you supervise the activities of James Holden?"

"No," she said.
"Thank you," said Manison. He turned to Waterman and waved him to any cross-questioning. Still puzzled, Waterman asked, "Mrs. Fisher, who did supervise the House on Martin's Hill?"
"James Holden."
"During those years, Mrs. Fisher, did James Holden at any time conduct himself in any other manner but the actions of an honest citizen? I mean, did he perform or suggest the performance of any illegal act to your knowledge?"

"No, he did not."

Waterman turned to Judge Carter. "Your Honor," he said, "it seems quite apparent to me that the plaintiff in this case has given more testimony to support the contentions of my client than they have to support their own case. Will the Court honor a petition that the case be dismissed?"

Judge Norman L. Carter smiled slightly. "This is irregular," he said. "You should wait for that petition until the plaintiff's counsel has closed his case, you know." He looked at Frank Manison. "Any objection?"

Manison said, "Your Honor, I have permitted my client to be shown in this questionable light for no other purpose than to bring out the fact that any man can make a mistake in the eyes of other men when in reality he was doing precisely what he thought to be the best thing to do for himself and for the people within his responsibility.
The man who raises his child to be a roustabout is wrong in the eyes of his neighbor who is raising his child to be a scientist, and vice versa. We'll accept the fact that James Holden's mind is superior. We'll point out that there have been many cases of precocious children or child geniuses who make a strong mark in their early years and drop into oblivion by the time they're twenty. Now, consider James Holden, sitting there discussing something with his attorney--I have no doubt in the world that he could conjugate Latin verbs, discuss the effect of the Fall of Rome on Western Civilization, and probably compute the orbit of an artificial satellite. But can James Holden fly a kite or shoot a marble? Has he ever had the fun of sliding into third base, or whittling on a peg, or any of the other enjoyable trivia of boyhood? Has he--"

"One moment," said Judge Carter. "Let's not have an impassioned oration, counsel. What is your point?"

"James Holden has a legal guardian, appointed by law at the express will of his parents. Headstrong, he has seen fit to leave that protection. He is fighting now to remain away from that protection. I can presume that James Holden would prefer to remain in the company of the Fishers where, according to Mrs. Fisher, he was not responsible to her whatsoever, but rather ran the show himself. I--"

"You can't make that presumption," said Judge Carter. "Strike it from the record."

"I apologize," said Manison. "But I object to dismissing this case until we find out just what James Holden has in mind for his future."

"I'll hold Counsel Waterman's petition in abeyance until the point you mention is in the record," said Judge Carter. "Counsel, are you finished?"

"Yes," said Manison. "I'll rest."

"Mr. Waterman?"

Waterman said, "Your Honor, we've been directed to show just cause why James Holden should not be returned to the protection of his legal guardian. Counsel has implied that James Holden desires to be placed in the legal custody of Mr. and Mrs. Fisher. This is a pardonable error whether it stands in the record or not. The fact is that James Holden does not need protection, nor does he want protection. To the contrary, James Holden petitions this Court to declare him legally competent so that he may conduct his own affairs with the rights, privileges, and indeed, even the risks taken by the status of adult.

"I'll point out that the rules and laws that govern the control and protection of minor children were passed by benevolent legislators to prevent exploitation, cruelty, and deprivation of the child's life by men who would take advantage of his immaturity. However we have here a young man of twelve who has shown his competence to deal with the adult world by actual practice. Therefore it is our contention that protective laws are not only unnecessary, but undesirable because they restrict the individual from his desire to live a full and fruitful life.

"To prove our contention beyond any doubt, I'll ask that James Holden be sworn in as my first witness."

Frank Manison said, "I object, Your Honor. James Holden is a minor and not qualified under law to give credible testimony as a witness."

"That, too," replied Manison easily.

"Your Honor, I take exception! It is my purpose to place James Holden on the witness stand, and there to show this Court and all the world that he is of honorable mind, properly prepared to assume the rights of an adult. We not only propose to show that he acted honorably, we shall show that James Holden consulted the law to be sure that whatever he did was not illegal."

"Or," added Manison, "was it so that he would know how close to the limit he could go without stepping over the line?"

"Your Honor," asked Waterman, "can't we have your indulgence?"

"I object! The child is a minor."

"I accept the statement!" stormed Waterman. "And I say that we intend to prove that this minor is qualified to act as an adult."

"And," sneered Manison, "I'll guess that one of your later arguments will be that Judge Carter, having accepted this minor as qualified to deliver sworn testimony, has already granted the first premise of your argument."

"I say that James Holden has indeed shown his competence already by actually doing it!"

"While hiding under a false façade!"

"A façade forced upon him by the restrictive laws that he is petitioning the Court to set aside in his case so that he need hide no longer."

Frank Manison said, "Your Honor, how shall the case of James Holden be determined for the next eight or ten years if we do grant James Holden this legal right to conduct his own affairs as an adult? That we must abridge the laws regarding compulsory education is evident. James Holden is twelve years and five months old. Shall he be granted the right to enter a tavern to buy a drink? Will his request for a license to marry be honored? May he enter
the polling place and cast his vote? The contention of counsel that the creation of Charles Maxwell was a physical necessity is acceptable. But what happens without 'Maxwell'? Must we prepare a card of identity for James Holden, stating his legal status, and renew it every year like an automobile license because the youth will grow in stature, add to his weight, and ultimately grow a beard? Must we enter on this identification card the fact that he is legally competent to sign contracts, rent a house, write checks, and make his own decision about the course of dangerous medical treatment—or shall we list those items that he is not permitted to do such as drinking in a public place, cast his vote, or marry? This State permits a youth to drive an automobile at the age of sixteen, this act being considered a skill rather than an act that requires judgment. Shall James Holden be permitted to drive an automobile even though he cannot reach the foot pedals from any position where he can see through the windshield?"

Judge Carter sat quietly. He said calmly, "Let the record show that I recognize the irregularity of this procedure and that I permit it only because of the unique aspects of this case. Were there a Jury, I would dismiss them until this verbal exchange of views and personalities has subsided.

"Now," he went on, "I will not allow James Holden to take the witness stand as a qualified witness to prove that he is a qualified witness. I am sure that he can display his own competence with a flow of academic brilliance, or his attorney would not have tried to place him upon the stand where such a display could have been demonstrated. Of more importance to the Court and to the State is an equitable disposition of the responsibility to and over James Quincy Holden."

Judge Norman L. Carter leaned forward and looked from Frank Manison to James Holden, and then to Attorney Waterman.

"We must face some awkward facts," he said. "If I rule that he be returned to Mr. Brennan, he will probably remain no longer than he finds it convenient, at which point he will behave just as if this Court had never convened. Am I not correct, Mr. Manison?"

"Your Honor, you are correct. However, as a member of the Department of Justice of this State, I suggest that you place the responsibility in my hands. As an Officer of the Court, my interest would be to the best interest of the State rather than based upon experience, choice, or opinion as to what is better for a five-year-old or a child prodigy. In other words, I would exert the control that the young man needed. At the same time I would not make the mistakes that were made by Mr. Brennan's personal opinion of how a child should be reared."

Waterman shouted, "I object, Your Honor. I object--"

Brennan leaped to his feet and cried, "Manison, you can't freeze me out--"

James Holden shrieked, "I won't! I won't!"

Judge Carter eyed them one by one, staring them into silence. Finally he looked at Janet Fisher and said, "May I also presume that you would be happy to resume your association with James Holden?"

She nodded and said, "I'd be glad to," in a sincere voice. Tim Fisher nodded his agreement.

Brennan whirled upon them and snarled. "My reward money--" but he was shoved down in his seat with a heavy hand by Frank Manison who snapped, "Your money bought what it was offered for. So now shut up, you utter imbecile!"

Judge Norman L. Carter cleared his throat and said, "This great concern over the welfare of James Holden is touching. We have Mr. Brennan already twice a loser and yet willing to try it for three times. We have Mr. and Mrs. Fisher who are not dismayed at the possibility of having their home occupied by a headstrong youth whose actions they cannot control. We find one of the ambitious members of the District Attorney's Office offering to take on an additional responsibility--all, of course, in the name of the State and the welfare of James Holden. Finally we have James Holden who wants no part of the word 'protection' and claims the ability to run his own life.

"Now it strikes me that assigning the responsibility for this young man's welfare is by no means the reason why you are present, and it similarly occurs to me that the young man's welfare is of considerably less importance than the very interesting question of how and why this young man has achieved so much."

With a thoughtful expression, Judge Carter said, "James Holden, how did you acquire this magnificent education at the tender age of twelve-plus?"

"I--"

"I object!" cried Frank Manison. "The minor is not qualified to give testimony."

"Objection overruled. This is not testimony. I have every right in the world to seek out as much information from whatever source I may select; and I have the additional right to inspect the information I receive to pass upon its competence and relevance. Sit down, counsel!"

Manison sat grumpily and Judge Carter eyed James again, and James took a full breath. This was the moment he had been waiting for.

"Go on, James. Answer my question. Where did you come by your knowledge?"

* * * * *
James Holden stood up. This was the question that had to arise; he was only surprised it had taken so long.
He said calmly: "Your Honor, you may not ask that question."
"I may not?" asked Judge Carter with a lift of his eyebrows.
"No sir. You may not."
"And just why may I not?"
"If this were a criminal case, and if you could establish that some of my knowledge were guilty knowledge, you
could then demand that I reveal the source of my guilty knowledge and under what circumstance it was obtained. If I
refused to disclose my source, I could then be held in contempt of court or charged with being an accessory to the
corpus of the crime. However, this is a court hearing to establish whether or not I am competent under law to
manage my own affairs. How I achieve my mental competence is not under question. Let us say that it is a process
that is my secret by the right of inheritance from my parents and as such it is valuable to me so long as I can demand
payment for its use."
"This information may have a bearing on my ruling."
"Your Honor, the acquisition of knowledge or information per se is concomitant with growing up. I can and
will demonstrate that I have the equivalent of the schooling necessary to satisfy both this Court and the State Board
of Education. I will state that my education has been acquired by concentration and application in home study, and
that I admit to attendance at no school. I will provide you or anybody else with a list of the books from which I have
gleaned my education. But whether I practice Yoga, Dianetics, or write the lines on a sugarcoated pill and swallow it
is my trade secret. It can not be extracted from me by any process of the law because no illegality exists."
"And what if I rule that you are not competent under the law, or withhold judgment until I have had an
opportunity to investigate these ways and means of acquiring an accelerated education?"
"I'll then go on record as asking you to disbar yourself from this hearing on the grounds that you are not an
impartial judge of the justice in my case."
"Upon what grounds?"
"Upon the grounds that you are personally interested in being provided with a process whereby you may
acquire an advanced education yourself."

The judge looked at James thoughtfully for a moment. "And if I point out that any such process is of extreme
interest to the State and to the Union itself, and as such must be disclosed?"
"Then I shall point out that your ruling is based upon a personal opinion because you don't know anything
about the process. If I am ruled a legal minor you cannot punish me for not telling you my secrets, and if I am ruled
legally competent, I am entitled to my own decision."
"You are within your rights," admitted Judge Carter with some interest. "I shall not make such a demand. But I
now ask you if this process of yours is both safe and simple."
"If it is properly used with some good judgment."
"Now listen to me carefully," said Judge Carter. "Is it not true that your difficulties in school, your inability to
get along with your classmates, and your having to hide while you toiled for your livelihood in secret--these are due
to this extensive education brought about through your secret process?"
"I must agree, but--"
"You must agree," interrupted Judge Carter. "Yet knowing these unpleasant things did not deter you from
placing, or trying to place, the daughter of your housekeeper in the same unhappy state. In other words, you hoped
to make an intellectual misfit out of her, too?"
"I--now see here--"
"You see here! Did you or did you not aid in the education of Martha Bagley, now Martha Fisher?"
"Yes, I did, and--"
"Was that good judgment, James Holden?"
"What's wrong with higher education?" demanded James angrily.
"Nothing, if it's acquired properly."
"But--"
"Now listen again. If I were to rule in your favor, would Martha Fisher be the next bratling in a long and
everlasting line of infant supermen applying to this and that and the other Court to have their legal majority ruled,
each of them pointing to your case as having established precedence?"
"I have no way of predicting the future, sir. What may happen in the future really has no bearing in evidence
here."
"Granted that it does not. But I am not going to establish a dangerous precedent that will end with doctors
qualified to practice surgery before they are big enough to swing a stethoscope or attorneys that plead a case before
they are out of short pants. I am going to recess this case indefinitely with a partial ruling. First, until this process of

yours comes under official study, I am declaring you, James Holden, to be a Ward of this State, under the jurisdiction of this Court. You will have the legal competence to act in matters of skill, including the signing of documents and instruments necessary to your continued good health. In all matters that require mature judgment, you will report to this Court and all such questions shall be rendered after proper deliberation either in open session or in chambers, depending upon the Court's opinion of their importance. The court stenographer will now strike all of the testimony given by James Holden from the record."

"I object!" exploded Brennan's attorney, rising swiftly and with one hand pressing Brennan down to prevent him from rising also.

"All objections are overruled. The new Ward of the State will meet with me in my chambers at once. Court is adjourned."

* * * * *

The session was stormy but brief. Holden objected to everything, but the voice of Judge Carter was loud and his stature was large; they overrode James Holden and compelled his attention.

"We're out of the court," snapped Judge Carter. "We no longer need observe the niceties of court etiquette, so now shut up and listen! Holden, you are involved in a thing that is explosively dangerous. You claim it to be a secret, but your secret is slowly leaking out of your control. You asked for your legal competence to be ruled. Fine, but if I allowed that, every statement made by you about your education would be in court record and your so-called secret that much more widespread. How long do you think it would have been before millions of people howled at your door? Some of them yelping for help and some of them bitterly objecting to tampering with the immature brain? You'd be accused of brainwashing, of making monsters, of depriving children of their heritage of happiness--and in the same ungodly howl there would be voices as loudly damning you for not tossing your process into their laps. And there would be a number trying to get to you on the sly so that they could get a head start over the rest.

"You want your competence affirmed legally? James, you have not the stature nor the voice to fight them off. Even now, your little secret is in danger and you'll probably have to bribe a few wiseacres with a touch of accelerated knowledge to keep them from spilling the whole story, even though I've ruled your testimony incompetent and immaterial and stricken from the record. Now, we'll study this system of yours under controlled conditions as your parents wanted, and we'll have professional help and educated advice, and both you and your process shall be under the protection of my Court, and when the time comes you shall receive the kudos and benefits from it. Understand?"

"Yes sir."

"Good. Now, as my first order, you go back to Shipmont and pack your gear. You'll report to my home as soon as you've made all the arrangements. There'll be no more hiding out and playing your little process in secret either from Paul Brennan--yes, I know that you believe that he was somehow instrumental in the death of your parents but have no shred of evidence that would stand in court--or the rest of the world. Is that, and everything else I've said in private, very clear?"

"Yes, sir."

"Good. Now, be off with you. And do not hesitate to call upon me if there is any interference whatsoever."

CHAPTER SIXTEEN

Judge Carter insisted and won his point that James Holden accept residence in his home.

He did not turn a hair when the trucks of equipment arrived from the house on Martin's Hill; he already had room for it in the cellar. He cheerfully allowed James the right to set it up and test it out. He respected James Holden's absolute insistence that no one be permitted to touch the special circuit that was the heart of the entire machine. Judge Carter also counter-requested--and enforced the request--that he be allowed to try the machinery out. He took a simple reading course in higher mathematics, after discovering that Holden's machine would not teach him how to play the violin. (Judge Carter already played the violin--but badly.)

Later, the judge committed to memory the entire book of Bartlett's Famous Quotations despite the objection of young Holden that he was cluttering up his memory with a lot of useless material. The Judge learned (as James had learned earlier) that the proper way to store such information in the memory was to read the book with the machine turned in "stand-by" until some section was encountered that was of interest. Using this method, the judge picked and pecked at the Holy Bible, a number of documents that looked like important governmental records, and a few books in modern history.

Then there came other men. First was a Professor Harold White from the State Board of Education who came to study both Holden and Holden's machinery and what it did. Next came a Dr. Persons who said very little but made diagrams and histograms and graphs which he studied. The third was a rather cheerful fellow called Jack Cowling who was more interested in James Holden's personal feelings than he was in the machine. He studied many subjects superficially and watched the behavior of young Holden as Holden himself studied subjects recommended
by Professor White.

White had a huge blackboard installed on the cellar wall opposite the machine, and he proceeded to fill the board with block outlines filled with crabbed writing and odd-looking symbols. The whole was meaningless to James Holden; it looked like the organization chart of a large corporation but it contained no names or titles. The arrival of each new visitor caused changes in the block diagram.

These arrivals went at their project with stop watches and slide rules. They calibrated themselves and James with the cold-blooded attitude of racetrack touts clocking their favorite horses. Where James had simply taken what he wanted or what he could at any single sitting, then let it settle in his mind before taking another dose of unpremeditated magnitude, these fellows ascertained the best effectiveness of each application to each of them. They tried taking long terms under the machine and then they measured the time it took for the installed information to sink in and settle into usable shape. Then they tried shorter and shorter sittings and measured the correspondingly shorter settling times. They found out that no two men were alike, nor were any two subjects. They discovered that a man with an extensive education already could take a larger sitting and have the new information available for mental use in a shorter settling time than a man whose education had been sketchy or incomplete.

They brought in men who had either little or no mathematics and gave them courses in advanced subjects. Afterwards they provided the foundation mathematics and they calibrated and measured the time it took for the higher subject to be understood as it aligned its information to the whole. Men came with crude English and bluntly read the dictionary and the proper rules of grammar and they were checked to see if their early bad-speech habits were corrected, and to what degree the Holden machine could be made to help repair the damage of a lifelong ingrained set of errors. They sent some of these boys through comparison dictionaries in foreign tongues and then had their language checked by specialists who were truly polylingual. There were some who spoke fluent English but no other tongue; these progressed into German with a German-to-English comparison dictionary, and then into French via a German-to-French comparison and were finally checked out in French by French-speaking examiners.

And Professor White's block diagram grew complex, and Dr. Persons's histograms filled pages and pages of his broad notebooks.

It was the first time that James Holden had ever seen a team of researchers plow into a problem, running a cold and icy scientific investigation to ascertain precisely how much cause produced how much effect. Holden, who had taken what he wanted or needed as the time came, began to understand the desirability of full and careful programming. The whole affair intrigued him and interested him. He plunged in with a will and gave them all the help he could.

He had no time to be bored, and he did not mark the passage of time until he arrived at his thirteenth birthday.

Then one night shortly after his birthday, James Holden discovered women indirectly. He had his first erotic dream. He had his first erotic dream.

We shall not go into the details of this midnight introduction to the arrival of manhood, for the simple reason that if we dwell on the subject, someone is certain to attempt a dream-analysis and come up with some flanged-up character-study or personality-quirk that really has nothing to do with the mind or body of James Holden. The truth is that his erotic dream was pleasantly stirring, but not entirely satisfactory. It was fun while it lasted, but it didn't last very long. It awakened him to the realization that knowledge is not the end-all of life, and that a full understanding of the words, the medical terms, and the biology involved did not tell him a thing about this primary drive of all life.

His total grasp of even the sideline issues was still dim. He came to a partial understanding of why Jake Caslow had entertained late visitors of the opposite sex, but he still could not quite see the reason why Jake kept the collection of calendar photographs and paintings hung up around the place. Crude jokes and rude talk heard long years before and dimly remembered did not have much connection with the subject. To James Holden, a "tomato" was still a vegetable, although he knew that some botanists were willing to argue that the tomato was really a fruit.

For many days he watched Judge Carter and his wife with a critical curiosity that their childless life had never known before. James found that they did not act as if something new and strangely thrilling had just hit the known universe. He felt that they should know about it. Despite the fact that he knew everything that his textbooks could tell him about sex and copulation he still had the quaint notion that the reason why Judge Carter and his wife were childless was because they had not yet gotten around to Doing It. He made no attempt to correlate this oddity with its opposite in Jake Caslow's ladies of the night who seemed to go on their merry way without conceiving.

He remembered the joking parry-and-thrust of that midnight talk between Tim Fisher and Janet Bagley but it made no sense to him still. But as he pondered the multitude of puzlements, some of the answers fell partly into place just as some of the matching pieces of a jigsaw puzzle may lie close to one another when they are dumped out of the box. Very dimly James began to realize that this sort of thing was not New, but to the contrary it had been going on for a long, long time. So long in fact that neither Tim Fisher nor Janet Bagley had found it necessary to
state desire and raise objection respectively in simple clear sentences containing subject, verb, and object. This much came to him and it bothered him even more, now that he understood that they were bandying their meanings lightly over a subject so vital, so important, so--so completely personal.

Then, in that oddly irrational corner of his brain that neither knowledge nor information had been adequate to rationalize nor had experience arrived to supply the explanation, James Holden's limited but growing comprehension arrived at a conclusion that was reasonable within its limited framework. Judge Carter and his wife occupied separate bedrooms and had therefore never Done It. Conversely, Tim and Janet Fisher from their midnight discussion obviously Knew What It Was All About. James wondered whether they had Done It yet, and he also wondered whether he could tell by listening to their discussions and conversations now that they'd been married at least long enough to have Tried It.

With a brand new and very interesting subject to study, James lost interest in the program of concentrated research. James Holden found that all he had to do to arrange a trip to Shipmont was to state his desire to go and the length of his visit. The judge deemed both reasonable, Mrs. Carter packed James a bag, and off he went.

* * * * *

The house on Martin's Hill was about the same, with some improvement such as a coat of paint and some needed repair work. The grounds had been worked over, but it was going to take a number of years of concentrated gardening to de-weed the tangled lawn and to cut the undergrowth in the thin woody back area where James had played in concealment.

But the air inside was changed. Janet, as Mrs. Bagley, had been as close to James Holden as any substitute mother could have been. Now she seemed preoccupied and too busy with her own life to act more than pleasantly polite. He could have been visiting the home of a friend instead of returning to the domicile he had created, in which he had provided her with a home--for herself and a frightened little girl. She asked him how he had been and what he was doing, but he felt that this was more a matter of taking up time than real interest. He had the feeling that somewhere deep inside, her soul was biting its fingernails. She spoke of Martha with pride and hope, she asked how Judge Carter was making out and whether Martha would be able to finish her schooling via Holden's machine.

James believed this was her problem. Martha had been educated far beyond her years. She could no more enter school now than he could; unwittingly he'd made Martha a misfit, too. So James tried to explain that part of the study undertaken in Judge Carter's program had been the question of what to do about Martha.

The professionals studying the case did not know yet whether Martha would remain ahead of her age group, or whether to let her loaf it out until her age group caught up with her, or whether to give Martha everything she could take as fast as she could take it. This would make a female counterpart of James Holden to study.

But knowing that there were a number of very brilliant scientists, educators, and psychologists working on Martha's problem did not cheer up Mrs. Janet Fisher as much as James thought it should. Yet as he watched her, he could not say that Tim Fisher's wife was unhappy.

Tim, on the other hand, looked fine. James watched them together as critically curious as he'd been in watching the Judge and Mrs. Carter. Tim was gentle with his wife, tender, polite, and more than willing to wait on her. From their talk and chit-chat, James could detect nothing. There were still elisions, questions answered with a half-phrase, comments added with a disconnected word and replied in another word that--in cold print--would appear to have no bearing on the original subject. This sort of thing told James nothing. Judge Carter and his wife did the same; if there were any difference to be noted it was only in the basic subject materials. The judge and his wife were inclined more toward discussions of political questions and judicial problems, whereas Tim and Janet Fisher were more interested in music, movies, and the general trend of the automobile repair business; or more to the point, whether to expand the present facility in Shipmont, to open another branch elsewhere, or to sell out to buy a really big operation in some sizable city.

James saw a change in Martha, too. It had been months since he came back home to supervise the removal of his belongings. Now Martha had filled out. She was dressed in a shirt-and-skirt instead of the little jumper dresses James remembered. Martha's hair was lightly wavy instead of trimmed short, and she was wearing a very faint touch of color on her lips. She wore tiny slippers with heels just a trifle higher than the altitude recommended for a girl close to thirteen.

Ultimately they fell into animated chatter of their own, just as they always had. There was a barrier between the pair of them and Martha's mother and stepfather--slightly higher than the usual barrier erected between children and their adults because of their educational adventures together. They had covered reams and volumes together. Martha's mother was interested in Holden's machine only when something specific came to her attention that she did not wish to forget such as a recipe or a pattern, and one very extensive course that enabled her to add a column of three-digit numbers by the whole lines instead of taking each column digit by digit. Tim Fisher himself had deeper interests, but nearly all of them directed at making Tim Fisher a better manager of the automobile repair business.
There had been some discussion of the possibility that Tim Fisher might memorize some subject such as the names of all baseball players and their yearly and lifetime scoring, fielding, and playing averages, training for him to go as a contestant on one of the big money giveaway shows. This never came to pass; Tim Fisher did not have any spectacular qualities about him that would land him an invitation. So Tim's work with Holden's machine had been straightforward studies in mechanics and bookkeeping and business management--plus a fine repertoire of bawdy songs he had rung in on the sly and subsequently used at parties.

James and Martha had taken all they wanted of education and available information, sometimes with plan and the guidance of schoolbooks and sometimes simply because they found the subject of interest. In the past they'd had discussions of problems in understanding; they'd talked of things that parents and elders would have considered utterly impossible to discuss with young minds. With this communion of interests, they fell back into their former pattern of first joining the general conversation politely and then gradually confining their remarks to one another until there were two conversations going on at the same time, one between James and Martha and another between Janet and Tim. Again, the vocal interference and cross-talk became too high, and it was Tim and Janet who left the living room to mix a couple of highballs and start dinner.

The chatter continued, but now with a growing strain on the part of young James Holden.

He wanted to switch to a more personal topic of conversation but he did not know how to accomplish this feat. There was plenty of interest but it was more clinical than passionate; he was not stirred to yearning, he felt no overwhelming desire to hold Martha's hand nor to feel the softness of her face, yet there was a stirring urge to make some form of contact. But he had no idea of how to steer the conversation towards personal lines that might lead into something that would justify a gesture towards her. It began to work on him. The original clinical urge to touch her just to see what reaction would obtain changed into a personal urge that grew higher as he found that he could not kick the conversational ball in that direction. The idea of putting an arm about her waist as he had seen men embrace their girls on television was a pleasing thought; he wanted to find out if kissing was as much fun as it was made up to be.

But instead of offering him any encouragement, or even giving him a chance to start shifting the conversation, Martha went prattling on and on about a book she'd read recently.

It did not occur to James Holden that Martha Bagley might entertain the idea of physical contact of some mild sort on an experimental basis. He did not even consider the possibility that he might start her thinking about it. So instead of closing the distance between them like a gentle wolf, watching with sly calculation to ascertain whether her response was positive, negative, or completely neutral, he sat like a post and fretted inwardly because he couldn't control the direction of their conversation.

Ultimately, of course, Martha ran out of comment on her book and then there fell a deadly silence because James couldn't dredge up another lively subject. Desperately, he searched through his mind for an opening. There was none. The bright patter between male and female characters in books he'd smuggled started off on too high a level on both sides. Books that were written adequately for his understanding of this problem signed off with the trite explanation that they lived happily ever afterwards but did not say a darned thing about how they went about it. The slightly lurid books that he'd bought, delivered in plain wrappers, gave some very illuminating descriptions of the art or act, but the affair opened with the scene all set and the principal characters both ready, willing, and able. There was no conversational road map that showed the way that led two people from a calm and unemotional discussion into an area that might lead to something entirely else.

In silence, James Holden sat there sinking deeper and deeper into his own misery.

The more he thought about it, the farther he found himself from his desire. Later in the process, he knew, came a big barrier called "stealing a kiss," and James with his literal mind provided this game with an aggressor, a defender, and the final extraction by coercion or violence of the first osculatory contact. If the objective could be carried off without the defense repulsing the advance, the rest was supposed to come with less trouble. But here he was floundering before he began, let alone approaching the barrier that must be an even bigger problem.

Briefly he wished that it were Christmas, because at Christmas people hung up mistletoe. Mistletoe would not only provide an opening by custom and tradition, it also cut through this verbal morass of trying to lead up to the subject by the quick process of supplying the subject itself. But it was a long time before Christmas. James abandoned that ill-conceived idea and went on sinking deep and feeling miserable.

Then Martha's mother took James out of his misery by coming in to announce dinner. Regretfully, James sighed for his lost moments and helplessness, then got to his feet and held out a hand for Martha.

She put her hand in his and allowed him to lift her to her feet by pulling. The first contact did not stir him at all, though it was warm and pleasant. Once the pulling pressure was off, he continued to hold Martha's hand, tentatively and experimentally.

Then Janet Fisher showered shards of ice with a light laugh. "You two can stand there holding hands," she said.
"But I'm going to eat it while it's on the table."

James Holden's hand opened with the swiftness of a reflex action, almost as fast as the wink of an eye at the flash of light or the body's jump at the crack of sound. Martha's hand did not drop because she, too, was holding his and did not let go abruptly. She giggled, gave his hand a little squeeze and said, "Let's go. I'm hungry too."

None of which solved James Holden's problem. But during dinner his personal problem slipped aside because he discovered another slight change in Janet Fisher's attitude. He puzzled over it quietly, but managed to eat without any apparent preoccupation. Dinner took about a half hour, after which they spent another fifteen minutes over coffee, with Janet refusing her second cup. She disappeared at the first shuffle of a foot under the table, while James and Martha resumed their years-old chore of clearing the table and tackling the dishwashing problem.

Alone in the kitchen, James asked Martha, "What's with your mother?"
"What do you mean, what's with her?"
"She's changed, somehow."
"In what way?"
"She seems sort of inner-thoughtful. Cheerful enough but as if something's bothering her that she can't stop."
"That all?"
"No," he went on. "She hiked upstairs like a shot right after dinner was over. Tim raced after her. And she said no to coffee."
"Oh, that. She's just a little upset in the middle."
"But why?"
"She's pregnant."
"Pregnant?"
"Sure. Can't you see?"
"Never occurred to me to look."
"Well, it's so," said Martha, scouring a coffee cup with an exaggerated flourish. "And I'm going to have a half-sibling."
"But look--"
"Don't you go getting upset," said Martha. "It's a natural process that's been going on for hundreds of thousands of years, you know."
"When?"
"Not for months," said Martha. "It just happened."
"Too bad she's unhappy."
"She's very happy. Both of them wanted it."

James considered this. He had never come across Voltaire's observation that marriage is responsible for the population because it provides the maximum opportunity with the maximum temptation. But it was beginning to filter slowly into his brain that the ways and means were always available and there was neither custom, tradition, nor biology that dictated a waiting period or a time limit. It was a matter of choice, and when two people want their baby, and have no reason for not having their baby, it is silly to wait.
"Why did they wait so long if they both want it?"
"Oh," replied Martha in a matter-of-fact voice, "they've been working at it right along."

James thought some more. He'd come to see if he could detect any difference between the behavior of Judge and Mrs. Carter, and the behavior of Tim and Janet Fisher. He saw little, other than the standard differences that could be accounted for by age and temperament. Tim and Janet did not really act as if they'd Discovered Something New. Tim, he knew, was a bit more sweet and tender to Janet than he'd been before, but there was nothing startling in his behavior. If there were any difference as compared to their original antics, James knew that it was undoubtedly due to the fact that they didn't have to stand lollygagging in the hallway for two hours while Janet half-heartedly insisted that Tim go home. He went on to consider his original theory that the Carters were childless because they occupied separate bedrooms; by some sort of deduction he came to the conclusion that he was right, because Tim and Janet Fisher were making a baby and they slept in the same bedroom.

He went on in a whirl; maybe the Carters didn't want children, but it was more likely that they too had tried but it hadn't happened.

And then it came to him suddenly that here he was in the kitchen alone with Martha Bagley, discussing the very delicate subject. But he was actually no closer to his problem of becoming a participant than he'd been an hour ago in the living room. It was one thing to daydream the suggestion when you can also daydream the affirmative response, but it was another matter when the response was completely out of your control. James was not old enough in the ways of the world to even consider outright asking; even if he had considered it, he did not know how to ask.
The evening went slowly. Janet and Tim returned about the time the dishwashing process was complete. Janet proposed a hand of bridge; Tim suggested poker, James voted for pinochle, and Martha wanted to toss a coin between canasta or gin rummy. They settled it by dealing a shuffled deck face upward until the ace of hearts landed in front of Janet, whereupon they played bridge until about eleven o'clock. It was interesting bridge; James and Martha had studied bridge columns and books for recreation; against them were aligned Tim and Janet, who played with the card sense developed over years of practice. The youngsters knew the theories, their bidding was as precise as bridge bidding could be made with value-numbering, honor-counting, response-value addition, and all of the other systems. They understood all of the coups and end plays complete with classic examples. But having all of the theory engraved on their brains did not temporarily imprint the location of every card already played, whereas Tim and Janet counted their played cards automatically and made up in play what they missed in stratagem.

At eleven, Janet announced that she was tired, Tim joined her; James turned on the television set and he and Martha watched a ten-year-old movie for an hour. Finally Martha yawned.

And James, still floundering, mentally meandered back to his wish that it were Christmas so that mistletoe would provide a traditional gesture of affection, and came up with a new and novel idea that he expressed in a voice that almost trembled:
"Tired, Martha?"
"Uh-huh."
"Well, why don't I kiss you good night and send you off to bed."
"All right, if you want to."
"Why?"
"Oh--just--well, everybody does it."

She sat near him on the low divan, looking him full in the face but making no move, no gesture, no change in her expression. He looked at her and realized that he was not sure of how to take hold of her, how to reach for her, how to proceed.

She said, "Well, go ahead."
"I'm going to."
"When?"
"As soon as I get good and ready."
"Are we going to sit here all night?"

In its own way, it reminded James of the equally un-brilliant conversation between Janet and Tim on the homecoming after their first date. He chuckled.

"What's so funny?"

"Nothing," he said in a slightly strained voice. "I'm thinking that here we sit like a couple of kids that don't know what it's all about."

"Well," said Martha, "aren't we?"

"Yes," he said reluctantly, "I guess we are. But darn it, Martha, how does a guy grow up? How does a guy learn these things?" His voice was plaintive, it galled him to admit that for all of his knowledge and his competence, he was still just a bit more than a child emotionally.

"I don't know," she said in a voice as plaintive as his. "I wouldn't know where to look to find it. I've tried. All I know," she said with a quickening voice, "is that somewhere between now and then I'll learn how to toss talk back and forth the way they do."

"Yes," he said glumly.

"James," said Martha brightly, "we should be somewhat better than a pair of kids who don't know what it's all about, shouldn't we?"

"That's what bothers me," he admitted. "We're neither of us stupid. Lord knows we've plenty of education between us, but--"

"James, how did we get that education?"

"Through my father's machine."

"No, you don't understand. What I mean is that no matter how we got our education, we had to learn, didn't we?"

"Why, yes. In a--"

"Now, let's not get involved in another philosophical argument. Let's run this one right on through to the end. Why are we sitting here fumbling? Because we haven't yet learned how to behave like adults."

"I suppose so. But it strikes me that anything should be--"

"James, for goodness' sake. Here we are, the two people in the whole world who have studied everything we
know together, and when we hit something we can't study--you want to go home and kiss your old machine," she finished with a remarkable lack of serial logic. She laughed nervously.

"What's so darned funny?" he demanded sourly.

"Oh," she said, "you're afraid to kiss me because you don't know how, and I'm afraid to let you because I don't know how, and so we're talking away a golden opportunity to find out. James," she said seriously, "if you fumble a bit, I won't know the difference because I'm no smarter than you are."

She leaned forward holding her face up, her lips puckered forward in a tight little rosebud. She closed her eyes and waited. Gingerly and hesitantly he leaned forward and met her lips with a pucker of his own. It was a light contact, warm, and ended quickly with a characteristic smack that seemed to echo through the silent house. It had all of the emotional charge of a mother-in-law's peck, but it served its purpose admirably. They both opened their eyes and looked at one another from four inches of distance. Then they tried it again and their second was a little longer and a little warmer and a little closer, and it ended with less of the noise of opening a fruit jar.

Martha moved over close beside him and put her head on his shoulder; James responded by putting an arm around her, and together they tried to assemble themselves in the comfortably affectionate position seen in movies and on television. It didn't quite work that way. There seemed to be too many arms and legs and sharp corners for comfort, or when they found a contortion that did not create interferences with limb or corner, it was a strain on the spine or a twist in the neck. After a few minutes of this coeducational wrestling they decided almost without effort to return to the original routine of kissing. By more luck than good management they succeeded in an embrace that placed no strain and which met them almost face to face. They puckered again and made contact, then pressure came and spread out the pair of tightly pursed rosebuds. Martha moved once to get her nose free of his cheek for a breath of air.

At the rate they were going, they might have hit paydirt this time, but just at the point where James should have relaxed to enjoy the long kiss he began to worry: There is something planned and final about the quick smacking kiss, but how does one gracefully terminate the long-term, high-pressure jobs? So instead of enjoying himself, James planned and discarded plans until he decided that the way he'd do it would be to exert a short, heavy pressure and then cease with the same action as in the quick-smack variety.

It worked fine, but as he opened his eyes to look at her, she was there with her eyes still closed and her lips still ready. He took a deep breath and plunged in again. Having determined how to start, James was now going to experiment with endings.

They came up for air successfully again, and then spent some time wriggling around into another position. The figure-fitting went easier this time, after threshing around through three or four near-comforts they came to rest in a pleasantly natural position and James Holden became nervously aware of the fact that his right hand was cupped over a soft roundness that filled his palm almost perfectly. He wondered whether to remove it quickly to let her know that this intimacy wasn't intentional; slowly so that (maybe, he hoped) she wouldn't realize that it had been there; or to leave it there because it felt pleasant. While he was wondering, Martha moved around because she could not twist her neck all the way around like an owl, and she wanted to see him. The move solved his problem but presented the equally great problem of how he would try it again.

James allowed a small portion of his brain to think about this, and put the rest of his mind at ease by kissing her again. Halfway through, he felt warm moistness as her lips parted slightly, then the tip of her tongue darted forward between his lips to quest against his tongue in a caress so fleeting that it was withdrawn before he could react--and James reacted by jerking his head back faster than if he had been clubbed in the face. He was still tingling with the shock, a pleasant shock but none the less a shock, when Martha giggled lightly.

He bubbled and blurted, "Wha--whu--?"

She told him nervously, "I've been wanting to try that ever since I read it in a book."

He shivered. "What book?" he demanded in almost a quaver.

"A paperback of Tim's. Mother calls them, Tim's sex and slay stories." Martha giggled again. "You jumped."

"Sure did. I was surprised. Do it again."

"I don't think so."

"Didn't you like it?"

"Did you?"

"I don't know. I didn't have time to find out."

"Oh."

He kissed her again and waited. And waited. And waited. Finally he moved back an inch and said, "What's the matter?"

"I don't think we should. Maybe we ought to wait until we're older."

"Not fair," he complained. "You had all the warning."
"But--"
"Didn't you like it?" he asked.
"Well, it gave me the most tickly tingle."
"And all I got was a sort of mild electric shock. Come on."
"No."
"Well, then, I'll do it to you."
"All right. Just once."

Leaping to the end of this midnight research, there are three primary ways of concluding, namely: 1, physical satisfaction; 2, physical exhaustion; and 3, interruption. We need not go into sub-classifications or argue the point. James and Martha were not emotionally ready to conclude with mutual defloration. Ultimately they fell asleep on the divan with their arms around each other. They weren't interrupted; they awoke as the first flush of daylight brightened the sky, and with one more rather chaste kiss, they parted to fall into the deep slumber of complete physical and emotional exhaustion.

CHAPTER SEVENTEEN

James Holden's ride home on the train gave him a chance to think, alone and isolated from all but superficial interruptions. He felt that he was quite the bright young man.

He noticed with surreptitious pride that folks no longer eyed him with sly, amused, knowing smiles whenever he opened a newspaper. Perhaps some of their amusement had been the sight of a youngster struggling with a full-spread page, employing arms that did not quite make the span. But most of all he hated the condescending tolerance; their everlasting attitude that everything he did was "cute" like the little girl who decked herself out in mother's clothing from high heels and brassiere to evening gown, costume jewelry, and a fumbled smear of makeup.

That was over. He'd made it to a couple of months over fourteen, he'd finally reached a stature large enough so that he did not have to prove his right to buy a railroad ticket, nor climb on the suitcase bar so that he could peer over the counter. Newsdealers let him alone to pick his own fare instead of trying to "save his money" by shoving Mickey Mouse at him and putting his own choice back on its pile.

He had not succeeded in gaining his legal freedom, but as Ward of the State under Judge Carter he had other interesting expectations that he might not have stumbled upon. Carter had connections; there was talk of James' entering a comprehensive examination at some university, where the examining board, forearmed with the truth about his education, would test James to ascertain his true level of comprehension. He could of course collect his bachelor's degree once he complied with the required work of term papers written to demonstrate that his information could be interwoven into the formation of an opinion, or reflection, or view of some topic. Master's degrees and doctor's degrees required the presentation of some original area of study, competence in his chosen field, and the development of some facet of the field that had not been touched before. These would require more work, but could be handled in time.

In fact, he felt that he was in pretty good shape. There were a couple of sticky problems, still. He wanted Paul Brennan to get his comeuppance, but he knew that there was no evidence available to support his story about the slaughter of his parents. It galled him to realize that cold-blooded, premeditated murder for personal profit and avarice could go undetected. But until there could be proffered some material evidence, Brennan's word was as good as his in any court. So Brennan was getting away with it.

The other little item was his own independence. He wanted it. That he might continue living with Judge Carter had no bearing. No matter how benevolent the tyranny, James wanted no part of it. In fighting for his freedom, James Holden's foot had slipped. He'd used his father's machine on Martha, and that was a legal error.

Martha? James was not really sorry he'd slipped. Error or not, he'd made of her the only person in the world who understood his problem wholly and sympathetically. Otherwise he would be completely alone.

Oh yes, he felt that he was quite the bright young man. He was coming along fine and getting somewhere. His very pleasant experiences in the house on Martin's Hill had raised him from a boy to a young man; he was now able to grasp the appreciation of the Big Drive, to understand some of the reasons why adults acted in the way that they did. He hadn't managed another late session of sofa with Martha, but there had been little incidental meetings in the hallway or in the kitchen with the exchange of kisses, and they'd boldly kissed goodbye at the railroad station under her mother's smile.

He could not know Janet Fisher's mind, of course. Janet, mother to a girl entering young womanhood, worried about all of the things that such a mother worries about and added a couple of things that no other mother ever had. She could hardly slip her daughter a smooth version of the birds and the bees and people when she knew full well that Martha had gone through a yard or so of books on the subject that covered everything from the advanced medical to the lurid expose and from the salacious to the ribald. Janet could only hope that her daughter valued her chastity according to convention despite the natural human curiosity which in Martha would be multiplied by the
girl's advanced education. Janet knew that young people were marrying younger and younger as the years went on; she saw young James Holden no longer as a rather odd youngster with abilities beyond his age. She saw him now as the potential mate for Martha. And when they embraced and kissed at the station, Janet did not realize that she was accepting this salute as the natural act of two sub-adults, rather than a pair of precocious kids.

At any rate, James Holden felt very good. Now he had a girl. He had acquired one more of the many attitudes of the Age of Maturity.

So James settled down to read his newspaper, and on page three he saw a photograph and an article that attracted his attention. The photograph was of a girl no more than seven years old holding a baby at least a year old. Beside them was a boy of about nine. In the background was a miserable hovel made of crude lumber and patched windows. This couple and their baby had been discovered by a geological survey outfit living in the backwoods hills. Relief, aid, and help were being rushed, and the legislature was considering ways and means of their schooling. Neither of them could read or write.

James read the article, and his first thought was to proffer his help. Aid and enlightenment they needed, and they needed it quickly. And then he stopped immediately because he could do nothing to educate them unless they already possessed the ability to read.

His second thought was one of dismay. His exultation came down with a dull thud. Within seconds he realized that the acquisition of a girl was no evidence of his competent maturity. The couple photographed were human beings, but intellectually they were no more than animals with a slight edge in vocabulary. It made James Holden sick at heart to read the article and to realize that such filth and ignorance could still go on. But it took a shock of such violence to make James realize that clams, guppies, worms, cats, dogs, and the great whales reproduced their kind; intellect, education and mature competence under law had nothing to do with the process whatsoever.

And while his heart was still unhappy, he turned to page four and read an open editorial that discussed the chances of The Educational Party in the coming Election Year.

* * * * *

James blinked.

"Splinter" parties, the editorial said, seldom succeeded in gaining a primary objective. They only succeeded in drawing votes from the other major parties, in splitting the total ballot, and dividing public opinion. On the other hand, they did provide a useful political weathervane for the major parties to watch most carefully. If the splinter party succeeded in capturing a large vote, it was an indication that the People found their program favorable and upon such evidence it behooved the major parties to mend their political fences—or to relocate them.

Education, said the editorial, was a primary issue and had been one for years. There had been experimenting with education ever since the Industrial Revolution uncovered the fact, in about 1900, that backbreaking physical toil was going to be replaced by educated workers operating machinery.

Then the editorial quoted Judge Norman L. Carter:

"'For many years,' said Judge Carter, 'we have deplored the situation whereby a doctor or a physicist is not considered fully educated until he has reached his middle or even late twenties. Yet instead of speeding up the curriculum in the early school years, we have introduced such important studies as social graces, baton twirling, interpretive painting and dancing, and a lot of other fiddle-faddle which graduates students who cannot spell, nor read a book, nor count above ten without taking off their shoes. Perhaps such studies are necessary to make sound citizens and graceful companions. I shall not contest the point. However, I contend that a sound and basic schooling should be included—and when I so contend I am told by our great educators that the day is not long enough nor the years great enough to accomplish this very necessary end.

"'Gentlemen, we leaders of The Education Party propose to accomplish precisely that which they said cannot be done!'"

The editorial closed with the terse suggestion: Educator--Educate thyself!

James Holden sat stunned.

What was Judge Carter doing?

* * * * *

James Holden arrived to find the home of Judge Norman L. Carter an upset madhouse. He was stopped at the front door by a secretary at a small desk whose purpose was to screen the visitors and to log them in and out in addition to being decorative. Above her left breast was a large enamelled button, red on top, white in the middle as a broad stripe from left to right, and blue below. Across the white stripe was printed CARTER in bold, black letters. From in back of the pin depended two broad silk ribbons that cascaded forward over the stuffing in her brassiere and hung free until they disappeared behind the edge of the desk. She eyed James with curiosity. "Young man, if you're looking for throwaways for your civics class, you'll have to wait until we're better organized--"

James eyed her with cold distaste. "I am James Quincy Holden," he told her, "and you have neither the
authority nor the agility necessary to prevent my entrance."
"You are--I what?"
"I live here," he told her flatly. "Or didn't they provide you with this tidbit of vital statistic?"
Wheels rotated behind the girl's eyes somewhere, and memory cells linked into comprehension. "Oh!--You're James."
"I said that first," he replied. "Where's Judge Carter?"
"He's in conference and cannot be disturbed."
"Your objection is overruled. I shall disturb him as soon as I find out precisely what has been going on."

He went on in through the short hallway and found audible confusion. Men in groups of two to four stood in corners talking in bedlam. There was a layer of blue smoke above their heads that broke into skirls as various individuals left one group to join another. Through this vocal mob scene James went veering from left to right to avoid the groupings. He stood with polite insolence directly in front of two men sitting on the stairs until they made room for his passage--still talking as he went between them. In his room, three were sitting on the bed and the chair holding glasses and, of course, smoking like the rest. James dropped his overnight bag on a low stand and headed for his bathroom. One of the men caught sight of him and said, "Hey kid, scram!"

James looked at the man coldly. "You happen to be using my bedroom. You should be asking my permission to do so, or perhaps apologizing for not having asked me before you moved in. I have no intention of leaving."
"Get the likes of him!"
"Wait a moment, Pete. This is the Holden kid."
"The little genius, huh?"
James said, "I am no genius. I do happen to have an education that provides me with the right to criticize your social behavior. I will neither be insulted nor patronized."
"Listen to him, will you!"

James turned and with the supreme gesture of contempt, he left the door open. He wound his way through the place toJudge Carter's study and home office, strode towards it with purpose and reached for the doorknob. A voice halted him: "Hey kid, you can't go in there!"
Turning to face the new voice, James said calmly, "You mean 'may not' which implies that I have asked your permission. Your statement is incorrect as phrased and erroneous when corrected."

He turned the knob and entered. Judge Carter sat at his desk with two men; their discussion ceased with the sound of the doorknob. The judge looked up in annoyance. "Hello, James. You shouldn't have come in here. We're busy. I'll let you know when I'm free."
"You'd better make time for me right now," said James angrily. "I'd like to know what's going on here."
"This much I'll tell you quickly. We're planning a political campaign. Now, please--"
"I know you're planning a political campaign," replied James. "But if you're proposing to campaign on the platform of a reform in education, I suggest that you educate your henchmen in the rudimentary elements of polite speech and gentle behavior. I dislike being ordered out of my room by usurpers who have the temerity to address me as 'hey kid'."
"Relax, James. I'll send them out later."
"I'd suggest that you tell them off," snapped James. He turned on his heel and left, heading for the cellar. In the workshop he found Professor White and Jack Cowling presiding over the machine. In the chair with the headset on sat the crowning insult of all:
Paul Brennan leafing through a heavy sheaf of papers, reading and intoning the words of political oratory. Unable to lick them, Brennan had joined them--or, wondered young Holden, was Judge Norman L. Carter paying for Brennan's silence with some plum of political patronage?

* * * * *

As he stood there, the years of persecution rose strong in the mind of James Holden. Brennan, the man who'd got away with murder and would continue to get away with it because there was no shred of evidence, no witness, nothing but James Holden's knowledge of Brennan's actions when he'd thought himself unseen in his calloused treatment of James Holden's dying mother; Brennan's critical inspection of the smashed body of his father, coldly checking the dead flesh to be sure beyond doubt; the cruel search about the scene of the 'accident' for James himself--interrupted only by the arrival of a Samaritan, whose name was never known to James Holden. In James rose the violent resentment of the years, the certain knowledge that any act of revenge upon Paul Brennan would be viewed as cold-blooded premeditated murder without cause or motive.
And then came the angry knowledge that simple slaughter was too good for Paul Brennan. He was not a dog to be quickly released from misery by a merciful death. Paul Brennan should suffer until he cried for death as a blessed
James Holden, angry, silently, unseen by the preoccupied workers, stole across the room to the main switch-panel, flipped up a small half-concealed cover, and flipped a small button.

There came a sharp Crack! that shattered the silence and re-echoed again and again through the room. The panel that held the repeater-circuit of the Holden Educator bulged outward; jets of smoke lanced out of broken metal, bulged corners, holes and skirled into little clouds that drifted upward—trailing a flowing billow of thick, black, pungent smoke that reached the low ceiling and spread outward, fanwise, obscuring the ceiling like a low-lying nimbus.

At the sound of the report, the man in the chair jumped as if he'd been stabbed where he sat.

"Ouyeowwwww!" yowled Brennan in a pitiful ululation. He fell forward from the chair, asprawl on wobbly hands and knees, on elbows and knees as he tried to press away the torrent of agony that hammered back and forth from temple to temple. James watched Brennan with cold detachment, Professor White and Jack Cowling looked on in paralyzed horror. Slowly, oh, so slowly, Paul Brennan managed to squirm around until he was sitting on the floor still cradling his head between his hands.

James said, "I'm afraid that you're going to have a rough time whenever you hear the word 'entrenched'." And then, as Brennan made no response, James Holden went on, "Or were you by chance reading the word 'pedagogue'?"

At the word, Brennan howled again; the pain was too much for him and he toppled sidewise to writhe in kicking agony.

James smiled coldly, "I'm sorry that you weren't reading the word 'the'. The English language uses more of them than the word 'pedagogue'."

With remarkable effort, Brennan struggled to his feet; he lurched toward James. "I'll teach you, you little--"

"Pedagogue?" asked James.

The shock rocked Brennan right to the floor again.

"Better sit there and think," said James coldly. "You come within a dozen yards of me and I'll say--"

"No! Don't!" screamed Paul Brennan. "Not again!"

"Now," asked James, "what's going on here?"

"He was memorizing a political speech," said Jack Cowling. "What did you do?"

"I merely fixed my machine so that it will not be used again."

"But you shouldn't have done that!"

"You shouldn't have been using it for this purpose," replied James. "It wasn't intended to further political ambitions."

"But Judge Carter--"

"Judge Carter doesn't own it," said James. "I do."

"I'm sure that Judge Carter can explain everything."

"Tell him so. Then add that if he'd bothered to give me the time of day, I'd be less angry. He's not to be interrupted, is he? I'm ordered out of my room, am I? Well, go tell the judge that his political campaign has been stopped by a fourteen-year-old boy who knows which button to push! I'll wait here."

Professor White took off; Jack Cowling smiled crookedly and shook his head at James. "You're a rash young man," he said. "What did you do to Brennan, here?"

James pointed at the smoke curling up out of the panel. "I put in a destructive charge to addle the circuit as a preventive measure against capture or use by unauthorized persons," he replied. "So I pushed the button just as Brennan was trying to memorize the word--"

"Don't!" cried Brennan in a pleading scream.

"You mean he's going to throw a fit every time he hears the word--"

"No! No! Can't anybody talk without saying--Owuuuuuuoo!"

"Interesting," commented James. "It seems to start as soon as the fore-reading part of his mind predicts that the word may be next, or when he thinks about it."

"Do you mean that Brennan is going to be like the guy who could win the world if he sat on the top of a hill for one hour and did not think of the word 'Swordfish'? Except that he'll be out of pain so long as he doesn't think of the word--"

"Thing I'm interested in is that maybe our orator here doesn't know the definition thoroughly. Tell me, dear 'Uncle' Paul, does the word 'teacher' give--Sorry. I was just experimenting. Wasn't as bad as--"

Gritting his teeth and wincing with pain, Brennan said, "Stop it! Even the word 'sch-(wince)-ool' hurts like--"

He thought for a moment and then went on with his voice rising to a pitiful howl of agony at the end: "Even the name 'Miss Adams' gives me a fleeting headache all over my body, and Miss Adams was on--ly--my--third--growww--school--Owuuuuuuoo--teach--earrrrrr--Owwww!"
Brennan collapsed in his chair just as Judge Carter came in with his white mane flying and hot fire in his attitude. "What goes on here?" he stormed at James.

"I stopped your campaign."

"Now see here, you young--"

Judge Carter stopped abruptly, took a deep breath and calmed himself with a visible effort to control his rage. "James," he said in a quieter voice, "Can you repair the damage quickly?"

"Yes--but I won't."

"And why not?"

"Because one of the things my father taught me was the danger of allowing this machine to fall into the hands of ruthless men with political ambition."

"And I am a ruthless man with political ambition?"

James nodded. "Under the guise of studying me and my machine," he said, "you've been using it to train speakers, and to educate ward-heelers. You've been building a political machine by buying delegates. Not with money, of course, because that is illegal. With knowledge, and because knowledge, education, and information are intangibles and no legality has been established, and this is all very legal."

Judge Carter smiled distantly. "It is bad to elevate the mind of the average ward-heeler? To provide the smalltime politician with a fine grasp of the National Problem and how his little local problems fit into the big picture? Is this making a better world, or isn't it?"

"It's making a political machine that can't be defeated."

"Think not? What makes you think it can't?"

"Pedagogue!" said James.

"Yeowww!"

The judge whirled to look at Brennan. "What was--that?" asked the judge.

James explained what had happened, then: "I've mentioned hazards. This is what would happen if a fuse blew in the middle of a course. Maybe he can be trained out of it, and maybe not. You'll have to try, of course. But think of what would happen if you and your political machine put these things into schools and fixed them to make a voltage twitch or something while the student was reading the word 'republican'. You'd end up with a single-party system."

"And get myself assassinated by a group of righteously irate citizens," said Judge Carter. "Which I would very warmly deserve. On the other hand, suppose we 'treated' people to feel anguish at thoughts of murder or killing, theft, treason, and other forms of human deviltry?"

"Now that might be a fine idea."

"It would not," said Judge Carter flatly. James Holden's eyes widened, and he started to say something but the judge held up his hand, fingers outspread, and began to tick off his points finger by finger as he went on: "Where would we be in the case of enemy attack? Could our policemen aim their guns at a vicious criminal if they were conditioned against killing? Could our butchers operate; must our housewives live among a horde of flies? Theft? Well, it's harder to justify, James, but it would change the game of baseball as in 'stealing a base' or it would ruin the game of love as in 'stealing a kiss'. It would ruin the mystery-story field for millions of people who really haven't any inclination to go out and rob, steal, or kill. Treason? Our very revered Declaration of Independence is an article of Treason in the eyes of King George Third; it wouldn't be very hard to draw a charge of treason against a man who complained about the way the Government is being run. Now, one more angle, James. The threat or fear of punishment hasn't deterred any potential felon so far as anybody knows. And I hold the odd belief that if we removed the quart of mixed felony, chicanery, falsehood, and underhandedness from the human makeup, on that day the human race could step down to take its place alongside of the cow, just one step ahead of the worm."

"Now you accuse me of holding political ambition. I plead guilty of the charge and demand to be shown by my accuser just what is undesirable about ambition, be it political or otherwise. Have you no ambition? Of course you have. Ambition drove your folks to create this machine and ambition drove you to the fight for your freedom. Ambition is the catalyst that lifts a man above his fellows and then lifts them also. There is a sort of tradition in this country that a man must not openly seek the office of the Presidency. I consider this downright silly. I have announced my candidacy, and I intend to campaign for it as hard as I can. I propose to make the problem of education the most important argument that has ever come up in a presidential campaign. I believe that I shall win because I shall promise to provide this accelerated education for everybody who wants it."

"And to do this you've used my machine," objected James.

"Did you intend to keep it for yourself?" snapped Judge Carter.

"No, but--"
"As soon as I could handle it myself."
"Oh, fine!" jeered the judge sourly. "Now, let me orate on that subject for a moment and then we'll get to the real meat of this argument. James, there is no way of delivering this machine to the public without delivering it to them through the hands of a capable Government agency. If you try to release it as an individual you'll be swamped with cries of anger and pleas for special consideration. The reactionaries will shout that we're moving too fast and the progressives will complain that we aren't moving fast enough. Teachers' organizations will say that we're throwing teachers out of jobs, and little petty politicians will try to slip their political plug into the daily course in Civics. Start your company and within a week some Madison Avenue advertising agency will be offering you several million dollars to let them convince people that Hickory-Chickory Coffee is the only stuff they can pour down their gullet without causing stomach pains, acid system, jittery nerves, sleepless nights, flat feet, upset glands, and so on and on and on. Announce it; the next day you'll have so many foreign spies in your bailiwick that you'll have to hire a stadium to hold them. You'll be ducking intercontinental ballistic missiles because there are people who would kill the dog in order to get rid of the fleas. You'll start the biggest war this planet has ever seen and it will go on long after you are killed and your father's secret is lost--and after the fallout has died off, we'll have another scientific race to recreate it. And don't think that it can't be rediscovered by determined scientists who know that such a thing as the Holden Electromechanical Educator is a reality."

"And how do you propose to prevent this war?"
"By broadcasting the secret as soon as we can; let the British and the French and the Russians and the Germans and all the rest build it and use it as wisely as they can program it. Which, by the way, James, brings us right back to James Quincy Holden, Martha Bagley, and the immediate future."

"Oh?"
"Yes. James, tell me after deliberation, at what point in your life did you first believe that you had the competence to enter the adult world in freedom to do as you believed right?"

"Um, about five or six, as I recall."
"What do you think now about those days?"
James shrugged. "I got along."
"Wasn't very well, was it?"
"No, but I was under a handicap, you know. I had to hide out."
"And now?"
"Well, if I had legal ruling, I wouldn't have to hide."
"Think you know everything you need to know to enter this adult world?"
"No man stops learning," parried James. "I think I know enough to start."
"James, no matter what you say, there is a very important but intangible thing called 'judgment'. You have part of it, but not by far enough. You've been studying the laws about ages and rights, James, but you've missed a couple of them because you've been looking for evidence favorable to your own argument. First, to become a duly elected member of the House of Representatives, a man must be at least twenty-five years of age. To be a Senator, he must be at least thirty. To be President, one must be at least thirty-five. Have you any idea why the framers of the Constitution of the United States placed such restrictions?"

"Well, I suppose it had to do with judgment?" replied James reluctantly.
"That--and experience. Experience in knowing people, in understanding that there might be another side to any question, in realizing that you must not approach every problem from your own purely personal point of view nor expect it to be solved to your own private satisfaction or to your benefit. Now, let's step off a distance and take a good look at James Quincy Holden and see where he lacks the necessary ingredients."

"Yes, tell me," said James, sourly.

"Oh, I intend to. Let's take the statistics first. You're four-feet eleven-inches tall, you weigh one-hundred and three pounds, and you're a few weeks over fourteen. I suppose you know that you've still got one more spurt of growth, sometimes known as the post-puberty-growth. You'll probably put on another foot in the next couple of years, spread out a bit across the shoulders, and that fuzz on your face will become a collection of bristles. I suppose you think that any man in this room can handle you simply because we're all larger than you are? Possibly true, and one of the reasons why we can't give you a ticket and let you proclaim yourself an adult. You can't carry the weight. But this isn't all. Your muscles and your bones aren't yet in equilibrium. I could find a man of age thirty who weighed one-oh-three and stood four-eleven. He could pick you up and spin you like a top on his forefinger just because his bones match his muscles nicely, and his nervous system and brain have had experience in driving the body he's living in."

"Could be, but what has all this to do with me? It does not affect the fact that I've been getting along in life."
"You get along. It isn't enough to 'get along.' You've got to have judgment. You claim judgment, but still you
realize that you can't handle your own machine. You can't even come to an equitable choice in selecting some agency to handle your machine. You can't decide upon a good outlet. You believe that proclaiming your legal competence will provide you with some mysterious protection against the wolves and thieves and ruthless men with political ambition—that this ruling will permit you to keep it to yourself until you decide that it is time to release it. You still want to hide. You want to use it until you are so far above and beyond the rest of the world that they can't catch up, once you give it to everybody. You now object to my plans and programs, still not knowing whether I intend to use it for good or for evil—and juvenile that you are, it must be good or evil and cannot be an in-between shade of gray. Men are heroes or villains to you; but I must say with some reluctance that the biggest crooks that ever held public office still passed laws that were beneficial to their people. There is the area in which you lack judgment, James. There and in your blindness."

"Blindness?"

"Blindness," repeated Judge Carter. "As Mark Twain once said, 'When I was seventeen, I was ashamed at the ignorance of my father, but by the time I was twenty-one I was amazed to discover how much the old man had learned in four short years!' Confound it, James, you don't yet realize that there are a lot of things in life that you can't even know about until you've lived through them. You're blind here, even though your life has been a solid case of encounter with unexpected experiences, one after the other as you grew. Oh, you're smart enough to know that you've got to top the next hill as soon as you've climbed this one, but you're not smart enough to realize that the next hill merely hides the one beyond, and that there are still higher hills beyond that stretching to the end of the road for you—and that when you've finally reached the end of your own road there will be more distant hills to climb for the folks that follow you.

"You've a fine education, and it's helped you tremendously. But you've loused up your own life and the life of Martha Bagley. You two are a pair of outcasts, and you'll be outcasts until about ten years from now when your body will have caught up with your mind so that you can join your contemporaries without being regarded as a pair of intellectual freaks."

"And what should I have done?" demanded James Holden angrily.

"That's just it, again. You do not now realize that there isn't anything you could have done, nor is there anything you can do now. That's why I'm taking over and I'm going to do it for you."

"Yes?"

"Yes!" snapped Judge Carter. "We'll let them have their courses in baton twirling and social grace and civic improvement and etiquette—and at the same time we'll give them history and mathematics and spelling and graduate them from 'high' school at the age of twelve or fourteen, introduce an intermediary school for languages and customs of other countries and in universal law and international affairs and economics, where our bookkeepers will learn science and scientists will understand commercial law; our lawyers will know business and our businessmen will be taught politics. After that we'll start them in college and run them as high as they can go, and our doctors will no longer go sour from the moment they leave school at thirty-five to hang out their shingle.

"As for you, James Holden, you and Martha Bagley will attend this preparatory school as soon as we can set it up. There will be no more of this argument about being as competent as an adult, because we oldsters will still be the chiefs and you kids will be the Indians. Have I made myself clear?"

"Yes sir. But how about Brennan?"

Judge Carter looked at the unhappy man. "You still want revenge? Won't he be punished enough just hearing the word 'pedagogue'?"

"For the love of--"

"Don't blaspheme," snapped the judge. "You'd hang if James could bring a shred of evidence, and I'd help him if I could." He turned to James Holden. "Now," he asked, "will you repair your machine?"

"And if I say No?"

"Can you stand the pressure of a whole world angered because you've denied them their right to an education?"

"I suppose not." He looked at Brennan, at Professor White and at Jack Cowling. "If I've got to trust somebody," he said reluctantly, "I suppose it might as well be you."

BOOK FOUR:
THE NEW MATURITY
CHAPTER EIGHTEEN

It is the campus of Holden Preparatory Academy.

It is spring, but many another spring must pass before the ambitious ivy climbs to smother the gray granite walls, before the stripling trees grow stately, before the lawn is sturdy enough to withstand the crab grass and the students. Anecdote and apocrypha have yet to evolve into hallowed tradition. The walks ways are bare of bronze plaques because there are no illustrious alumni to honor; Holden Preparatory has yet to graduate its first class.
It is youth, a lusty infant whose latent power is already great enough to move the world. As it rises, the world rises with it for the whole consists of all its parts; no man moves alone.

The movement has its supporters and its enemies, and between them lies a vast apathy of folks who simply don't give a damn. It supporters deplore the dolts and the sluggards who either cannot or will not be educated. Its enemies see it as a danger to their comfortable position of eminence and claim bitterly that the honored degree of doctor is being degraded. They refuse to see that it is not the degradation of the standard but rather the exaltation of the norm. Comfortable, they lazily object to the necessity of rising with the norm to keep their position. Nor do they realize that the ones who will be assaulting their fortress will themselves be fighting still stronger youth one day when the mistakes are corrected and the program streamlined through experience.

On the virgin lawn, in a spot that will someday lie in the shade of a great oak, a group of students sit, sprawl, lie. The oldest of them is sixteen, and it is true that not one of them has any reverence for college degrees, because the entrance requirements demand the scholastic level of bachelor in the arts, the sciences, in language and literature. The mark of their progress is not stated in grades, but rather in the number of supplementary degrees for which they qualify. The honors of their graduation are noted by the number of doctorates they acquire. Their goal is the title of Scholar, without which they may not attend college for their ultimate education. But they do not have the "look of eagles" nor do they act as if they felt some divine purpose fill their lives. They do not lead the pack in an easy lope, for who holds rank when admirals meet? They are not dedicated nor single-minded; if their jokes and pranks start on a higher or lower plane, it is just because they have better minds than their forebears at the same time.

On the fringe of this group, an olive-skinned Brazilian co-ed asks: "Where's Martha?"

John Philips looks up from a diagram of fieldmatrics he's been using to lay out a football play. "She's lending moral support to Holden. He's sweating out his scholar's impromptu this afternoon."

"Why should he be stewing?"

John Philips smiles knowingly. "Tony Dirk put the triple-whammy on him. Gimmicked up the random-choice selector in the Regent's office. Herr von James is discoursing on the subjects of Medicine, Astronomy, and Psychology--that is if Dirk knows his stuff."

Tony Dirk looks down from his study of a fluffy cloud. "Anybody care to hazard some loose change on my ability?"

"But why?"

"Oh," replies Philips, "we figure that the first graduating class could use a professional Astrologer! We'll be the first in history to have one--if M'sieu Holden can tie Medicine, Astronomy, and Psychology into something cogent in his impromptu."

It is a strange tongue they are using, probably the first birth-pains of a truly universal language. By some tacit agreement, personal questions are voiced in French, the reply in Spanish. Impersonal questions are Italian and the response in Portuguese. Anything of a scientific nature must be in German; law, language, or literature in English; art in Japanese; music in Greek; medicine in Latin; agriculture in Czech. Anything laudatory in Mandarin, derogatory in Sanskrit--and ad libitum at any point for any subject.

Anita Lowes has been trying to attract the attention of John Philips from his diagram long enough to invite her to the Spring Festival by reciting a low-voiced string of nuclear equations carefully compounded to make them sound naughty unless they're properly identified with full attention. She looks up and says, "What if he doesn't make the connection?"

Philips replies, "Well, if he can prove to that tough bunch that there is no possible advance in learning through a combination of Astronomy, Medicine, and Psychology, he'll make it on that basis. It's just as important to close a door as it is to open one, you know. But it's one rough deal to prove negation. Maybe we'll have James the Holden on our hands for another semester. Martha will like that."

"Talking about me?"

There is a rolling motion, sort of like a bushel of fish trying to leap back into the sea. The newcomer is Martha Fisher. At fifteen, her eyes are bright, and her features are beginning to soften into the beginning of a beauty that will deepen with maturity.

"James," says Tony Dirk. "We figured you'd like to have him around another four months. So we gimmicked him."

"You mean that test-trio?" chuckles Martha.

"How's he doing?"

"When I left, he was wriggling his way through probability math, showing the relationship between his three subjects and the solution for random choice figures which may or may not be shaded by known or not-known agency. He's covered Mason's History of Superstition and--"
“Superstition?” asks a Japanese.

Martha nods. "He claimed superstition is based upon fear and faith, and he feared that someone had tampered with his random choice of subjects, and he had faith that it was one of his buddies. So--"

Martha is interrupted by a shout. The years have done well by James Holden, too. He is a lithe sixteen. It is a long time since he formed his little theory of human pair-production and it is almost as long since he thought of it last. If he reconsiders it now, he does not recognize his part in it because everything looks different from within the circle. His world, like the organization of the Universe, is made up of schools containing classes of groups of clusters of sets of associations created by combinations and permutations of individuals.

"I made it!" he says.

James has his problems. Big ones. Shall he go to Harvard alone, or shall he go to coeducational California with the hope that Martha will follow him? Then there was the fun awaiting him at Heidelberg, the historic background of Pisa, the vigorous routine at Tokyo. As a Scholar, he has contributed original research in four or five fields to attain doctorates, now he is to pick a few allied fields, combine certain phases of them, and work for his Specific. It is James Holden's determination to prove that the son is worthy of the parents for which his school is named.

But there is high competition. At Carter tech-prep, a girl is struggling to arrange a Periodic Chart of the Nucleons. At Maxwell, one of his contemporaries will contend that the human spleen acts as an ion-exchange organ to rid the human body of radioactive minerals, and he will someday die trying to prove it. His own classmate Tony Dirk will organize a weather-control program, and John Philips will write six lines of odd symbols that will be called the Inertiogravitic Equations.

Their children will reach the distant stars, and their children's children will, humanlike, cross the vast chasm that lies between one swirl of matter and the other before they have barely touched their home galaxy.

No man is an island, near or far on Earth as it is across the glowing clusters of galaxies--nay, as it may be in Heaven itself.

The motto is cut deep in the granite over the doorway to Holden Hall:

YOU YOURSELF MUST LIGHT THE FAGGOTS THAT YOU HAVE BROUGHT
Smith admitted he had made an error involving a few murders—and a few thousand years. He was entitled to a sense of humor, though, even in the Ultroom!

HB73782. Ultroom error. Tendal 13. Arvid 6. Kanad transfer out of 1609 complete, intact, but too near limit of 1,000 days. Next Kanad transfer ready. 1951. Reginald, son of Mr. and Mrs. Martin Laughton, 3495 Orland Drive, Marionville, Illinois, U. S. A. Arrive his 378th day. TB73782.

Nancy Laughton sat on the blanket she had spread on the lawn in her front yard, knitting a pair of booties for the PTA bazaar. Occasionally she glanced at her son in the play pen, who was getting his daily dose of sunshine. He was gurgling happily, examining a ball, a cheese grater and a linen baby book, all with perfunctory interest.

When she looked up again she noticed a man walking by—except he turned up the walk and crossed the lawn to her.

He was a little taller than her husband, had piercing blue eyes and a rather amused set to his lips.

"Hello, Nancy," he said.

"Hello, Joe," she answered. It was her brother who lived in Kankakee.

"I'm going to take the baby for a while," he said.

"All right, Joe."

He reached into the pen, picked up the baby. As he did so the baby's knees hit the side of the play pen and young Laughton let out a scream—half from hurt and half from sudden lack of confidence in his new handler. But this did not deter Joe. He started off with the child.

Around the corner and after the man came a snarling mongrel dog, eyes bright, teeth glinting in the sunlight. The man did not turn as the dog threw himself at him, burying his teeth in his leg. Surprised, the man dropped the screaming child on the lawn and turned to the dog. Joe seemed off balance and he backed up confusedly in the face of the snapping jaws. Then he suddenly turned and walked away, the dog at his heels.

"I tell you, the man said he was my brother and he made me think he was," Nancy told her husband for the tenth time. "I don't even have a brother."

Martin Laughton sighed. "I can't understand why you believed him. It's just—just plain nuts, Nancy!"

"Don't you think I know it?" Nancy said tearfully. "I feel like I'm going crazy. I can't say I dreamt it because there was Reggie with his bleeding knees, squalling for all he was worth on the grass—Oh, I don't even want to think about it."

"We haven't lost Reggie, Nancy, remember that. Now why don't you try to get some rest?"

"You—you don't believe me at all, do you, Martin?"

When her husband did not answer, her head sank to her arms on the table and she sobbed.

"Nancy, for heaven's sake, of course I believe you. I'm trying to think it out, that's all. We should have called the police."

Nancy shook her head in her arms. "They'd--never--believe me either," she moaned.

"I'd better go and make sure Reggie's all right." Martin got up out of his chair and went to the stairs.

"I'm going with you," Nancy said, hurriedly rising and coming over to him.

"We'll go up and look at him together."

They found Reggie peacefully asleep in his crib in his room upstairs. They checked the windows and tucked in the blankets. They paused in the room for a moment and then Martin stole his arm around his wife and led her to the door.

"As I've said, sergeant, this fellow hypnotized my wife. He made her think he was her brother. She doesn't even have a brother. Then he tried to get away with the baby." Martin leaned down and patted the dog. "It was Tiger here who scared him off."

The police sergeant looked at the father, at Nancy and then at the dog. He scribbled notes in his book.

"Are you a rich man, Mr. Laughton?" he asked.

"Not at all. The bank still owns most of the house. I have a few hundred dollars, that's all."

"What do you do?"

"Office work, mostly. I'm a junior executive in an insurance company."

"Any enemies?"
"No ... Oh, I suppose I have a few people I don't get along with, like anybody else. Nobody who'd do anything
like this, though."

The sergeant flipped his notebook closed. "You'd better keep your dog inside and around the kid as much as
possible. Keep your doors and windows locked. I'll see that the prowler keeps an eye on the house. Call us if
anything seems unusual or out of the way."

Nancy had taken a sedative and was asleep by the time Martin finished cleaning the .30-.30 rifle he used for
deer hunting. He put it by the stairs, ready for use, fully loaded, leaning it against the wall next to the telephone
stand.

* * * * *

The front door bell rang. He answered it. It was Dr. Stuart and another man.
"I came as soon as I could, Martin," the young doctor said, stepping inside with the other man. "This is my new
assistant, Dr. Tompkins."

Martin and Tompkins shook hands.
"The baby--?" Dr. Stuart asked.
"Upstairs," Martin said.
"You'd better get him, Dr. Tompkins, if we're to take him to the hospital. I'll stay here with Mr. Laughton.
How've you been, Martin?"
"Fine."
"How's everything at the office?"
"Fine."
"And your wife?"
"She's fine, too."
"Glad to hear it, Martin. Mighty glad. Say, by the way, there's that bill you owe me. I think it's $32, isn't that
right?"
"Yes, I'd almost forgotten about it."
"Why don't you be a good fellow and write a check for it? It's been over a year, you know."
"That's right. I'll get right at it." Martin went over to his desk, opened it and started looking for his checkbook.
Dr. Stuart stood by him, making idle comment until Dr. Tompkins came down the stairs with the sleeping baby
cuddled against his shoulder.
"Never mind the check, now, Martin. I see we're ready to go." He went over to his assistant and took the baby.
Together they walked out the front door.
"Good-bye," Martin said, going to the door.
Then he was nearly bowled over by the discharge of the .30-.30. Dr. Stuart crumpled to the ground, the baby
falling to the lawn. Dr. Tompkins whirled and there was a second shot. Dr. Tompkins pitched forward on his face.
The figure of a woman ran from the house, retrieved the now squalling infant and ran back into the house. Once
inside, Nancy slammed the door, gave the baby to the stunned Martin and headed for the telephone.
"One of them was the same man!" she cried.
Martin gasped, sinking into a chair with the baby. "I believed them," he said slowly and uncomprehendingly.
"They made me believe them!"
"Those bodies," the sergeant said. "Would you mind pointing them out to me, please?"
"Aren't they--aren't they on the walk?" Mrs. Laughton asked.
"There is nothing on the walk, Mrs. Laughton."
"But there must be! I tell you I shot these men who posed as doctors. One of them was the same man who tried
to take the baby this afternoon. They hypnotized my husband--"
"Yes, I know, Mrs. Laughton. We've been through that." The sergeant went to the door and opened it. "Say,
Homer, take another look around the walk and the bushes. There's supposed to be two of them. Shot with a .30-.30."
He turned and picked up the gun and examined it again. "Ever shoot a gun before, Mrs. Laughton?"
"Many times. Martin and I used to go hunting together before we had Reggie."
The sergeant nodded. "You were taking an awful chance, shooting at a guy carrying your baby, don't you
think?"
"I shot him in the legs. The other--the other turned and I shot him in the chest. I could even see his eyes when
he turned around. If I hadn't pulled the trigger then ... I don't want to remember it."
The patrolman pushed the door open. "There's no bodies out here but there's some blood. Quite a lot of blood.
A little to one side of the walk."
The policemen went out.
"Thank God you woke up, Nancy," Martin said. "I'd have let them have the baby." He reached over and
smoothed the sleeping Reggie's hair.

Nancy, who was rocking the boy, narrowed her eyes.

"I wonder why they want our baby? He's just like any other baby. We don't have any money. We couldn't pay a ransom."

"Reggie's pretty cute, though," Martin said. "You will have to admit that."

Nancy smiled. Then she suddenly stopped rocking.

"Martin!"

He sat up quickly.

"Where's Tiger?"

Together they rose and walked around the room. They found him in a corner, eyes open, tongue protruding. He was dead.

* * * * *

"If we keep Reggie in the house much longer he'll turn out to be a hermit," Martin said at breakfast a month later. "He needs fresh air and sunshine."

"I'm not going to sit on the lawn alone with him, Martin. I just can't, that's all. I'd be able to think of nothing but that day."

"Still thinking about it? I think we'd have heard from them again if they were coming back. They probably got somebody else's baby by this time." Martin finished his coffee and rose to kiss her good-bye. "But for safety's sake I guess you'd better keep that gun handy."

The morning turned into a brilliant, sunshiny day. Puffs of clouds moved slowly across the summer sky and a warm breeze rustled the trees. It would be a crime to keep Reggie inside on a day like this, Nancy thought.

So she called Mrs. MacDougal, the next door neighbor. Mrs. MacDougal was familiar with what had happened to the Laughtons and she agreed to keep an eye on Nancy and Reggie and to call the police at the first sign of trouble.

With a fearful but determined heart Nancy moved the play pen and set it up in the front yard. She spread a blanket for herself and put Reggie in the pen. Her heart pounded all the while and she watched the street for any strangers, ready to flee inside if need be. Reggie just gurgled with delight at the change in environment.

* * * * *

This peaceful scene was disturbed by a speeding car in which two men were riding. The car roared up the street, swerved toward the parkway, tires screaming, bounced over the curb and sidewalk, straight toward the child and mother. Reggie, attracted by the sudden noise, looked up to see the approaching vehicle. His mother stood up, set her palms against her cheeks and shrieked.

The car came on, crunched over the play pen, killing the child. The mother was hit and instantly killed, force of the blow snapping her spine and tossing her against the house. The car plunged on into a tree, hitting it a terrible blow, crumbling the car's forward end so it looked like an accordion. The men were thrown from the machine.

"We'll never be able to prosecute in this case," the states attorney said. "At least not on a drunken driving basis."

"I can't get over it," the chief of police said. "I've got at least six men who will swear the man was drunk. He staggered, reeled and gave the usual drunk talk. He reeked of whiskey."

The prosecutor handed the report over the desk. "Here's the analysis. Not a trace of alcohol. He couldn't have even had a smell of near beer. Here's another report. This is his physical exam made not long afterwards. The man was in perfect health. Only variations are he had a scar on his leg where something, probably a dog, bit him once. And then a scar on his chest. It looked like an old gunshot wound, they said. Must have happened years ago."

"That's odd. The man who accosted Mrs. Laughton in the afternoon was bitten by their dog. Later that night she said she shot the same man in the chest. Since the scars are healed it obviously couldn't be the same man. But there's a real coincidence for you. And speaking of the dogbite, the Laughton dog died that night. His menu evidently didn't agree with him. Never did figure what killed him, actually."

"Any record of treatment on the man she shot?"

"The men. You'll remember, there were two. No, we never found a trace of either. No doctor ever made a report of a gunshot wound that night. No hospital had a case either--at least not within several hundred miles--that night or several nights afterwards. Ever been shot with .30-.30?"

The state attorney shook his head. "I wouldn't be here if I had."

"I'll say you wouldn't. The pair must have crawled away to die. God knows where."

"Getting back to the man who ran over the child and killed Mrs. Laughton. Why did he pretend to be drunk?"

It was the chief's turn to shake his head. "Your guess is as good as mine. There are a lot of angles to this case none of us understand. It looks deliberate, but where's the motive?"
"What does the man have to say?"

"I was afraid you'd get to him," the chief said, his neck reddening. "It's all been rather embarrassing to the department." He coughed self-consciously. "He's proved a strange one, all right. He says his name is John Smith and he's got cards to prove it, too—for example, a social security card. It looks authentic, yet there's no such number on file in Washington, so we've discovered. We've had him in jail for a week and we've all taken turns questioning him. He laughs and admits his guilt—in fact, he seems amused by most everything. Sometimes all alone in his cell he'll start laughing for no apparent reason. It gives you the creeps."

* * * * *

The states attorney leaned back in his chair. "Maybe it's a case for an alienist."

"One jump ahead of you. Dr. Stone thinks he's normal, but won't put down any I.Q. Actually, he can't figure him out himself. Smith seems to take delight in answering questions—sort of anticipates them and has the answer ready before you're half through asking."

"Well, if Dr. Stone says he's normal, that's enough for me." The prosecutor was silent for a moment. Then, "How about the husband?"

"Laughton? We're afraid to let him see him. All broken up. No telling what kind of a rumpus he'd start—especially if Smith started his funny business."

"Guess you're right. Well, Mr. Smith won't think it's so funny when we hang criminal negligence or manslaughter on him. By the way, you've checked possible family connections?"

"Nobody ever saw John Smith before. Even at the address on his driver's license. And there's no duplicate of that in Springfield, in case you're interested."

The man who had laughingly told police his name was John Smith lay on his cot in the county jail, his eyes closed, his arms folded across his chest. This gave him the appearance of being alert despite reclining. Even as he lay, his mouth held a hint of a smile.

Arvid 6—for John Smith was Arvid 6—had lain in that position for more than four hours, when suddenly he snapped his eyes open and appeared to be listening. For a moment a look of concern crossed his face and he swung his legs to the floor and sat there expectantly. Arvid 6 knew Tendal 13 had materialized and was somewhere in the building.

Eventually there were some sounds from beyond the steel cell and doorway. There was a clang when the outer doorway was opened and Arvid 6 rose from his cot.

"Your lawyer's here to see you," the jailer said, indicating the man with the brief case. "Ring the buzzer when you're through." The jailer let the man in, locked the cell door and walked away.

The man threw the brief case on the jail cot and stood glaring.

"Your damned foolishness has gone far enough. I'm sick and tired of it," he declared. "If you carry on any more we'll never get back to the Ultroom!"

"I'm sorry, Tendal," the man on the cot said. "I didn't think—"

"You're absolutely right. You didn't think. Crashing that car into that tree and killing that woman—that was the last straw. You don't even deserve to get back to our era. You ought to be made to rot here."

"I'm really sorry about that," Arvid 6 said.

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"You know the instructions. Just because you work in the Ultroom don't get to thinking human life doesn't have any value. We wouldn't be here if it hadn't. But to unnecessarily kill—" The older man shook his head. "You could have killed yourself as well and we'd never get the job done. As it is, you almost totally obliterated me." Tendal 13 paced the length of the cell and back again, gesturing as he talked.

"It was only with the greatest effort I pulled myself back together again. I doubt that you could have done it. And then all the while you've been sitting here, probably enjoying yourself with your special brand of humor I have grown to despise."

"You didn't have to come along at all, you know," Arvid 6 said.

"How well I know! How sorry I am that I ever did! It was only because I was sorry for you, because someone older and more experienced than you was needed. I volunteered. Imagine that! I volunteered! Tendal 13 reaches the height of stupidity and volunteers to help Arvid 6 go back 6,000 years to bring Kanad back, to correct a mistake Arvid 6 made!" He snorted. "I still can't believe I was ever that stupid. I only prove it when I pinch myself and here I am.

"Oh, you've been a joy to be with! First it was that hunt in ancient Mycenae when you let the lion escape the hunters' quaint spears and we were partly eaten by the lion in the bargain, although you dazzled the hunters, deflecting their spears. And then your zest for drink when we were with Octavian in Alexandria that led to everybody's amusement but ours when we were ambushed by Anthony's men. And worst of all, that English
barmaid you became engrossed with at our last stop in 1609, when her husband mistook me for you and you let him take me apart piece by piece--"

"All right, all right," Arvid 6 said. "I'll admit I've made some mistakes. You're just not adventurous, that's all."

"Shut up! For once you're going to listen to me. Our instructions specifically stated we were to have as little as possible to do with these people. But at every turn you've got us more and more enmeshed with them. If that's adventure, you can have it." Tendal 13 sat down wearily and sank his head in his hands. "It was you who conceived the idea of taking Reggie right out of his play pen. 'Watch me take that child right out from under its mother's nose' were your exact words. And before I could stop you, you did. Only you forgot an important factor in the equation--the dog, Tiger. And you nursed a dog bite most of the afternoon before it healed. And then you took your spite out on the poor thing by suggesting suffocation to it that night.

"And speaking of that night, you remember we agreed I was to do the talking. But no, you pulled a switch and captured Martin Laughton's attention. 'I came as soon as I could, Martin,' you said. And suddenly I played a very minor role. 'This is my new assistant, Dr. Tompkins,' you said. And then what happened? I get shot in the legs and you get a hole in your back. We were both nearly obliterated that time and we didn't even come close to getting the child.

"Still you wanted to run the whole show. 'I'm younger than you,' you said. 'I'll take the wheel.' And the next thing I know I'm floating in space halfway to nowhere with two broken legs, a spinal injury, concussion and some of the finest bruises you ever saw."

* * * * *

"These twentieth century machines aren't what they ought to be," Arvid 6 said.

"You never run out of excuses, do you, Arvid? Remember what you said in the Ultroom when you pushed the lever clear over and transferred Kanad back 6,000 years? 'My hand slipped.' As simple as that. 'My hand slipped.' It was so simple everyone believed you. You were given no real punishment. In a way it was a reward--at least to you--getting to go back and rescue the life germ of Kanad out of each era he'd been born in."

Tendal 13 turned and looked steadily and directly at Arvid 6. "Do you know what I think? I think you deliberately pushed the lever over as far as it would go just to see what would happen. That's how simple I think it was."

Arvid 6 flushed, turned away and looked at the floor.

"What crazy things have you been doing since I've been gone?" Tendal 13 asked.

Arvid 6 sighed. "After what you just said I guess it wouldn't amuse you, although it has me. They got to me right after the accident before I had a chance to collect my wits, dematerialize or anything--you said we shouldn't dematerialize in front of anybody."

"That's right."

"Well, I didn't know what to do. I could see they thought I was drunk, so I was. But they had a blood sample before I could manufacture any alcohol in my blood, although I implanted a memory in them that I reeked of it." He laughed. "I fancy they're thoroughly confused."

"And you're thoroughly amused, no doubt. Have they questioned you?"

"At great length. They had a psychiatrist in to see me. He was a queer fellow with the most stupid set of questions and tests I ever saw."

"And you amused yourself with him."

"I suppose you'd think so."

"Who do you tell them you are?"

"John Smith. A rather prevalent name here, I understand. I manufactured a pasteboard called a social security card and a driver's license--"

"Never mind. It's easy to see you've been your own inimitable self. Believe me, if I ever get back to the Ultroom I hope I never see you again. And I hope I'll never leave there again though I'm rejuvenated through a million years."

"Was Kanad's life germ transferred all right this time?"

Tendal 13 shook his head. "I haven't heard. The transfers are getting more difficult all the time. In 1609, you'll remember, it was a case of pneumonia for the two-year-old. A simple procedure. It wouldn't work here. Medicine's too far along." He produced a notebook. "The last jump was 342 years, a little more than average. The next ought to be around 2250. Things will be more difficult than ever there, probably."

"Do you think Kanad will be angry about all this?"

"How would you like to have to go through all those birth processes, to have your life germ knocked from one era to the next?"

"Frankly, I didn't think he'd go back so far."
"If it had been anybody but Kanad nobody'd ever have thought of going back after it. The life germ of the head of the whole galactic system who came to the Ultroom to be transplanted to a younger body—and then sending him back beyond his original birth date—" Tendal 13 got up and commenced his pacing again. "Oh, I suppose Kanad's partly to blame, wanting rejuvenating at only 300 years. Some have waited a thousand or more or until their bones are like paper."

"I just wonder how angry Kanad will be," Arvid muttered.


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Arvid 6 rose from the cot and the two men faced each other.
"Before we leave, Arvid," Tendal 13 started to say.
"I know, I know. You want me to let you handle everything."
"Exactly. Is that too much to ask after all you've done?"
"I guess I have made mistakes. From now on you be the boss. I'll do whatever you say."
"I hope I can count on that." Tendal 13 rang the jail buzzer.

The jailer unlocked the cell door.
"You remember the chief said it's all right to take him with me, Matthews," Tendal 13 told the jailer.
"Yes, I remember," the jailer said mechanically, letting them both out of the cell.

They walked together down the jail corridor. When they came to another barred door the jailer fumbled with the keys and clumsily tried several with no luck.

Arvid 6, an amused set to his mouth and devilment in his eyes, watched the jailer's expression as he walked through the bars of the door. He laughed as he saw the jailer's eyes bulge.

"Arvid!

Tendal 13 walked briskly through the door, snatched Arvid 6 by the shoulders and shook him.

The jailer watched stupified as the two men vanished in the middle of a violent argument.
He had never cast his consciousness so far before. It floated high above New York, perceiving in the noonday sky the thin, faint crescent of a waning moon. He wondered if one day he might cast his mind even to the moon, knew with a mounting exultation that his powers were already great enough.

Yet he was as afraid to launch it on that awesome transit as he still was to send it delving into the tight subway tunnels in the rock of Manhattan. Phobias were too real now. Perhaps it would be different later....

He was young, as a man, younger as a recognized developing psi. As his consciousness floated there above the bustling city, exultant, free, it sensed that back where his body lay a bell was ringing. And the bell meant it--his consciousness--must return now to that body....

* * * * *

Dale V. Lawrence needed a lawyer urgently. Not that he hadn't a score of legal minds at his disposal; a corporation president must maintain a sizable legal staff. You can't build an industrial empire without treading on people's toes. And you need lawyers when you tread.

He sat behind his massive mahogany desk, a stocky, slightly-balding, stern-looking man of middle age who was psychosomatically creating another ulcer as he worried about the business transaction which he could not handle personally because of the ulcer operation he was about to have. Neither the business transaction nor the operation could be delayed.

He needed a particularly clever lawyer, one not connected with the corporation. Not that he had committed or that he contemplated committing a crime. But the eyes of the law and the minds of the psis of the government's Business Ethics Bureau were equally keen. Anyone in the business of commercially applied atomics was automatically and immediately investigated in any proposed transaction as soon as BEB had knowledge thereof. There was still the fear that someone somewhere might attempt, secretly, to build a war weapon again.

Lawrence had an idea, a great, burning, impossible-to-discard idea. Lawrence Applied Atomics, Inc., had been his first great idea--the idea that had made him a multi-millionaire. But through some devious financing he had lost control of the corporation. And although his ideas invariably realized millions, the other major stockholders were becoming cautious about risking their profits. Overly cautious, he thought. And on this new idea he knew they would never support him. They'd consider it a wild risk. He could blame BEB with its psis for that. BEB was too inquisitive. A business man just couldn't take a decent gamble any longer.

The real estate firm in Los Angeles was secretly securing options from individual landowners. Fortunately the firm employed a psi, one of the few known psis not in government service. Lawrence had wondered why this psi was not working for the government, but decided the 'why' didn't matter if there were positive results.

Lawrence knew a little about psis. He knew, of course, what was commonly known--that they possessed wide and very varied talents, that they were categorized as plain psis, psi-espers, esper-psis, telepaths and other things. They weren't numerous; the Business Ethics Bureau which employed at least sixty percent of the known psis showed thirty on the payroll for this fiscal year.

Despite their rumored emotional instability, he knew that they were clever and he would steer clear of them in the present stages of his transaction. Although his idea wasn't unethical, the so far closely kept secret would be out if BEB investigated. Then anybody could cut in. BEB advertised whatever it did on its video show, "Your Developing Earth."

So, he needed a lawyer who could act for him personally, now, and steer his project clear of the government service psis. But where to find a psi....

* * * * *

Of course! Bob Standskill! Standskill had helped him once years before when he had had that trouble with the Corporation Stock Control Board over a doubtful issue of securities he had floated to build Mojave City out of desert wastes. Without Standskill's techniques he never would have put that issue across. Standskill could handle this if anyone could.

Lawrence reached to the visiphone, punched the button sequence of Standskill's office number. The bell rang interminably before a rather bored young voice said, "Offices of Standskill and Rich, Attorneys-at-Law."
"I know," Lawrence said harshly. "I don't button wrong numbers. Is Standskill there? And where's your courtesy? There's no visual."

The picture came in then. Lawrence caught a flash of long, skinny legs going down behind the desk at the other end of the circuit; then he saw a most remarkable thing—the open collar of the young man's shirt seemed suddenly to button itself and the knot of the gaudy tie to tighten and all the while the fellow's hands were lying immobile on the desk!

Impossible! Lawrence thought. I'm cracking up! Too many worries about the psis ... I think I see them everywhere!

As the youth gulped as though the tie was knotted too tightly, Lawrence was sure that he saw the knot relax itself!

"I'm sorry, Mr. Lawrence, Mr. Standskill's on vacation and Mr. Rich is in court. May I help you, sir, or take a message?"

Undoubtedly the fellow had recognized him from news fotos.

"Well, who are you, the office boy?"

A frown of annoyance crossed the young man's thin, dark features. He snapped, "Are corporation presidents exempt from common courtesy? My name is Black--Martin J. Black. I'm not connected with this firm. I answered as a courtesy. Shall we disconnect?"

Lawrence was silent for a moment. He thought of the shirt-tie business and said, "You're a trainee psi, aren't you? A prospective service psi?"

"I'm afraid so. I wish I weren't. It's not a pleasant prospect."

"What do you mean?"

"Would you like to probe minds for a living? And it has its other drawbacks. You can't live normally and you'll have very few friends. Unfortunately no two psis are alike, which makes the job more complicated. I'm un-normal, abnormal, subnormal or some other normal they haven't prefixed yet."

"Any special talents?"

"I'm afraid so."

"Rather young," Lawrence mused. Then said, "Are you economically stable?"

The young man hesitated, then said hastily, "Oh, yes, of course. Economically, yes. Somewhat more stable than most, I think. I'm in final training now. The legal phase comes last, you know."

"Then you're not committed yet? You've not taken the Oath of Anterhine?"

"No. I won't until the training is done. Wish I didn't have to then."

"And your training?"

"Complete except for criminal psychology."

"Would you like to make a hundred thousand dollars?"

Black said, "Your firm bought out Black Controlled Atomics, remember? That was my dad, and that was the end for him." He hesitated. "Let's say I'm vaguely interested. What's your proposition?"

Lawrence was silent for a moment. At length he said, "Being a psi your ultimate destiny is to aid in the development of the world whether you like to look forward to it or not. But would you not like to see desert areas developed through applied atomics as Mojave City, Sanup Plateau City and Quijota City were?"

"Certainly," Black said quickly. "It's in my blood. The old man did well at such developments; in fact, he started Quijota. Sometimes I wish Standskill hadn't liquidated our estate, but my mother's will made it mandatory."

"How much do you know about Standskill's techniques?"

"I'm a psi," Black said. "I can find out anything I want to know."

"Where is Standskill?"

"Paris. His first vacation in years. Going to be away quite a while."

"Will you come to my office?"

"Why?"

"I'd like to discuss a business proposition."

"What's wrong with doing it over the visiphone?"

"This is confidential," Lawrence said.

"Something not exactly legal?" Black asked. "Big deal, eh? The Control Board again--oh, oh! You'd better see Standskill!"

Lawrence felt uneasy. "Are you--are you reading my mind?" he stammered.

"Sorry," the young man said, smiling faintly. "It's easier that way. I dislike physical movement on such warm days as this. And it's easier for me to pick up your proposal this way than to go through that beastly traffic."

"Then you know?"
"Certainly. I'm a psi so I can read your mind."
"Do you accept the job?"
"Well, people in that area and the country in general would certainly benefit from the development. I don't know about that lawyer from Los Angeles though. They teach us in Service Psi School that non-service psis are not to be trusted. In fact, service psis are forbidden to associate with non-service psis. They're considered unethical."
"You're not in service yet, Black, and you must realize that the psi-ethics as taught in your school are much more strict than business ethics. If Standskill were here he'd certainly help me, and you know he has a fine code of ethics. It's desperate, Black. I need your services urgently. Won't you please accept the job?"

* * * * *
"I suppose so," the young man said wearily, resignedly. "Standskill would agree, I'm sure. But, as a trainee, I'm not supposed to meddle in business transactions. However, I'd hate to see you lose out on this because I know Standskill would unhesitatingly help you if he were here. Also, I'm curious to meet that psi from Los Angeles." His sharp chin grew resolute. "I'll try, Mr. Lawrence. And my conscience will be clear; I haven't yet taken the Oath."
"Will you need anything--any physical help, any tangible thing?"
"I'll need your power-of-attorney."
"You'll have it before I go to the hospital."
"And, Mr. Lawrence," Black said softly. "About the surgery--don't worry, you'll be okay. It's chiefly psychosomatic, you know. In a couple of weeks you'll be fine. You couldn't have picked a better doctor than Summers."

Lawrence felt better already, a result of his talk with this brash young man.
"Thank you, Black," he said. "Thank you very much. But, look--as a psi, can you assure me that my idea is not slightly lunatic? I've begun to doubt that it will work."
Lunatic.... Mentally unsound.... Luna.... Moon.... The crescent of the moon in the noonday sky. Yes, he could go now.... The transit was brief.... No! He must go back, must bear the consciousness that was Martin Black back from this airless, cratered sphere! Panic seized him. He fled.

Lawrence was astounded to see the young man at the other end of the visiphone seemingly fall into a deep sleep, his head down suddenly on the desk.
"Black," he cried, "are you all right? Shall I send a doctor to--"
"No!"
The young man raised his head. "I'm quite all right, Mr. Lawrence, though slightly exhausted. Didn't sleep well last night. Sorry! I'll ring you after I contact Dick Joyce."
"No names, please," Lawrence said. "I go into the hospital this afternoon, Black. You'd better not contact me there. The doctor said no business while I'm there. From now on you're on your own."
"Your own! He was drifting! He fought it...."
"Right, Mr. Lawrence. Goodbye!"

II
Martin Black was tired. His consciousness had almost drifted off to home again, back to that old mansion on the Hudson River which Standskill had sold as directed under Black's mother's will. The old house in which he was born, where he had first found that he could sit in his room and send his consciousness questing down the hall to meet his father when he came home, pry into what his father had brought for him and surprise his parents later by invariably guessing correctly.

Sometimes now he wished that he hadn't "guessed" correctly so often in those days. Then his uncle Ralph wouldn't have mentioned his unusual ability to the Business Ethics Bureau and the psis wouldn't have investigated him. Once they found that he had such mental qualifications he had been sent to the Service Psi School, a virtual prison despite his family's social status.

Anger suddenly choked him at the thought of what his uncle Ralph had brought upon him. The psi training had been so rigid, so harsh at times.

Well, of course they have to be sure that psis develop into useful members of society. But couldn't they treat you more normally, more humanly?

Now, perhaps he'd show them, repay them for the cruel years of a lonely, bitter youth. He hadn't taken the Oath yet, and if he were clever enough he'd never have to! The real estate lawyer in Los Angeles with whom Lawrence was making a deal had evaded service somehow, apparently. So it was possible.

He had learned long ago that money wouldn't buy him out of service. He'd tried also to purchase certain liberties at school. Some of the less scrupulous teachers had taken his allowance, but only one of them had ever given him anything in return. And of course he couldn't protest when he had violated Ethics to give the bribes. In any event, no one would take the word of an untrained psi over the word of a stable, normal human being.
During the stabilization course one professor had permitted him to skip some classes. Now he wished that he hadn't missed them; he probably wouldn't have this semantic instability to contend with now. Oh, well....

He was tired. He'd spent the previous night, or most of it, worrying about the miserable state of his finances. He needed money, a lot of money. But he wouldn't, of course, admit that to Lawrence.

Lawrence would have understood why he needed money--even more than the hundred thousand he had offered. But then Lawrence might mistrust his motives in accepting the proposal so readily if he knew.

A year before Black had invested too much of his own money in a "sure thing" upon the advice of a fellow psi trainee who, he subsequently and sadly found out, had economic instability. Semantic instability was bad enough!

Not that Martin Black didn't have a hundred thousand dollars. He was, indeed, a rather wealthy young man, thanks to his mother who had been, to her son's knowledge--and to his alone--a psi with definite powers of pre- vision and persuasion.

He recalled the tale Mom had told him of her first meeting with Dad, of how she'd lingered over Dad's well groomed nails three times longer than desire for a good tip made necessary, while she'd gently insinuated into his mind an idea that was next day translated into action on the stock market, with a modest investment from a modest purse that brought the young man a small fortune. After the wedding Martha Black dedicated herself to further improvements in the same direction.

As for Martin's father, his chief business assets had been an unswerving adoration of his wife and complete willingness to do with his money as she saw fit. The combination had been unbeatable.

When Martin's father was laid to rest, Martha Black, concerned over the future of her somewhat unusual son and fearing that economic instability might beset him, continued to improve the fortune he would some day inherit.

Long before the death of his mother five years before, Black Controlled Atomics, Inc., had grown sufficiently important to command the services of a lawyer of Standskill's caliber. Gradually Standskill had become general counsel to the Black enterprises and at the same time a close friend of Martha Black and her son.

It was chiefly in the latter capacity that the widow consulted Standskill as she approached the end of her life. Her Last Will and Testament, duly signed, sealed, published and declared, left one-half of the immediately-to-be-liquidated estate to her son outright. The other half was put in trust.

Under the trust Martin was to receive the income until he was thirty. If then an audit showed that his net worth, exclusive of the trust, had increased by thirty percent the trust was to end and Martin was to receive the principal. If not, the trust would end and the full amount thereof would go to his uncle Ralph, a prospect which caused Martin completely to lose his stability whenever he allowed himself to think of it. He just had to make the thirty percent!

R. W. Standskill was trustee, and the will gave him full power to invest the trust estate as he saw fit and without liability if his investments went bad and without any bond or security required of him whatsoever. More in token of appreciation of his services than anything else, Standskill was to receive one percent of the trust as long as he was trustee.

Martin Black's mind dwelled on the thought of the thirty percent increase. After five years of conservative investing he had taken some bad advice in the past year. And now he had to make some money fast in order to catch up to the quota which was necessary if he were to achieve his goal.

The Lawrence deal would give him his chance. But not if Standskill knew about it. The Lawrence deal seemed a good thing, but perhaps it was only a sure thing if he kept to himself, for the time being at least.

He was so tired.... Fatigué. The French for tired. Funny, he did remember some of the French from school. Standskill was in Paris. Association. Fatigué. The word stuck. That club--Bob Standskill's favorite--Le Cheval Fatigué in Montmartre. The Tired Horse. Tired....

Sleep closed in.... He drifted ... and came to with a sudden start as a hand roughly shook his shoulder. It seemed as though he had been hovering mentally in a dimly-lighted cellar cafe, where there was a babel of voices speaking continental languages, and Standskill was there.

But, no! he couldn't have been in Paris any more than he had been on the meteor-pounded wastes of the moon! It was ridiculous. As far as he knew, no psi had ever been known consciously to flit to the moon--or unconsciously, for that matter--or to the other side of an ocean!

Standskill's partner, G. D. Rich, was shaking his shoulder. "What's the matter, Marty? Big night?"

"Big day," Black said. "Why don't you fellows stick around and take care of your business? I'm not even supposed to answer the telephone, you know, but someone has to!"

"Can I help it that the Legal Secretaries Guild has called a three-day convention? There's not a secretary present in any law office in New York right now! I personally cut the phone in to the answering service before I left for court."

"Inadvertence, I guess," Black said thoughtfully.

"Inadvertence?" Rich said quickly.
"Mine. I must have cut it back."

He didn't tell Rich that he hadn't stirred from the desk since Rich had left. The switch was in the outer office. Had he with his consciousness floating high over New York sensed subconsciously that Lawrence was about to call and so cut in the switch? Had he built into himself something of the pattern of his mother, something of pre-vision or prescience, or call it what you will? Was a latent hunch power coming out in him now, something that would manifest itself by acts not consciously controlled? He hoped not! Semantic instability was bad enough!

III

Sleep evaded Martin Black again that night.... There was no doubt that Lawrence had a great idea.

Lawrence held forty-five percent of the company's stock. He wanted control. In fact, he wanted outright ownership, but this was not possible because the other major stockholders, holding forty-five percent, seemed to be perfectly satisfied with their lucrative investment. Cautious inquiries had failed to disclose any inclination on their respective parts to sell.

There were, however, enough independent shares outstanding to give Lawrence control if they were added to his own. The thing to do was to figure a way to buy them. The problem was that no matter how secret his operations, news or rumors of them would certainly leak out. The shares would then undoubtedly jump to outrageous highs. Lawrence couldn't risk that. He'd not be able to buy sufficient shares if the price rose.

His corporation had completed Quijotoa City and had built Mojave City and Sanup Plateau City, had through applied atomics created verdant and lovely places out of wasteland and desert. It still owned the atomic piles that provided power for the cities and the profits therefrom were enormous.

Lawrence was progressive. He was at heart a humanitarian. He wanted to develop other areas more from the humanitarian view than the profit motive. He had learned long ago that the profits would take care of themselves.

In probing the man's mind, Black sensed Lawrence's great desire for adulation, his great desire to be remembered as a public benefactor.

Now if only he, Martin J. Black, could benefit financially from this new deal--if he could corner enough of those independent shares, he could and certainly would vote them Lawrence's way. Then, perhaps the possibility of making the thirty percent he needed would approach probability, would reach it. With Lawrence's Midas touch the corporation would also realize millions in profits if the deal went through.

Figures revolved in Black's mind. If Lawrence--or if he--could corner six percent of the stock.... Could some of the independents be persuaded to sell, psionically persuaded? Or one of the other major stockholders? No, that would be unethical and the strongest part of a psi's training was a fine code of ethics.

Black began to doze--and felt something ever so softly probing at his mind. A probe! Probably a service psi checking on him. Why? Just the usual check? No, it wasn't due.

He knew what to do. He had been probed before. Probing was part of the training at psi school but he had never revealed--and his tutors had never guessed--that he could create a block that could not be sensed by the prober. A block which could close off whatever thoughts he wished to conceal.

He blocked his thoughts of Lawrence and the deal now, and opened freely that part of his mind which held the routine thoughts of the law offices. He felt that feather of thought brushing lightly through his brain, then it was gone as quickly as it had come.

There was a cold sweat over him but he knew that he had passed the test. Why the probe? Perhaps a BEB psi had wind of Lawrence's deal and by probing Lawrence's mind--or the mind of someone in the West Coast realty outfit--had somehow learned of Black's association with the industrialist. If that were the case there would be more probes. One time or another a probe might come at a moment of nervous tension or stress and the information would be gleaned from his mind before he could block!

He must work fast.

He arose and went to the visiphone, placed a person-to-person call to Los Angeles.

"Dick Joyce?" he asked before the visual contact was complete, and only his voice went out.

The face that came in sync on the screen was round, jovial. "Well, hello, Marty!"

Lawrence must have called him, or else he plucked the name from my mind. But he didn't probe--or did he?

"Dick, do you register?" With the mind now--cautiously!

"Yes, Marty."

Pretend you're my personal friend, Dick. There's no psi on us but we may be wiretapped by BEB--lots of law offices are and trainees connected with them. Can a definite date be set for the picking-up of the options?

"It's good to see you again, Marty! When will you be coming out for another visit?" Yes, the options are in the bag. My agents have them all lined up. Confidently, they couldn't miss. The only trouble they ran into was that some of the landowners thought they were insane to be interested in the property and one of them actually suffered a sprained wrist from the hand-shaking of an overly thankful owner.
"Soon. That's why I called you. Thought we should get together after all these years." What's the latest date for signing?

Tomorrow night.

Tomorrow night! That doesn't give much time! Since I'm acting for Lawrence I have to see what we're getting. Well, Lawrence told us to work fast. But I agree that it's a good idea that you see the properties. "How about this weekend?" His voice was casual.

Tomorrow evening local time it is then. But where will we make psi-contact?

A mental picture of a map. Desolation... Oklahoma....

"Okay, Dick. See you then. Regards to the family!"

"Goodbye, Marty."

He rang off.

He was tired. He went to bed and sought sleep, praying that the block his fatigued mind had set would remain firm.

IV

Martin Black passed a very bad night. Maintaining a mental block when asleep is a major feat, especially when one has semantic instability and a dream can so often be so realistic as to bring one's consciousness awake and mentally screaming miles from the physical being it has involuntarily left.

He dreamed with incredible regularity, waking five times out of nightmares, five times strangely on the hour as though he had tied some part of his mental being to the irresistibly moving, luminescent minute hand of his electric clock. Time is of the essence, he had told himself during the psi-visiphone contact with Joyce. Association!

Two A.M. He had dreamt of Joyce, dreamt that Joyce had somehow revealed the proposed transaction to BEB, putting Dodson on his trail. Wide awake now, he forced himself to think of the options which must be picked up the following night, options drawn so that not only the landowners must sign them but both the realty outfit and he, as Lawrence's attorney-in-fact, as well. Could he sign for Lawrence if Joyce had spilled?... No, it was only a dream. Joyce was so very stable!

Three A.M. He had dreamt of Standskill, tall, lean Standskill striding through the lovely early morning along the Champs Élysées, moving purposefully. He had even dreamt he had for a moment invaded Standskill's mind and caught the lawyer's pounding thought, "Lawrence! Buy, Lawrence!" Oh, but that would never do. The service psis would catch Standskill, would test the ethics of it now that Joyce had spilled, would cause Standskill to be disbarred. But Standskill didn't know! A dream. A lunatic dream.

Four A.M. The coincidence of the timing of his wakings struck him then. For a moment the latest dream eluded him and then the sense of airless cold, a bleak, cratered landscape, stark stars staring in a lunar night swept coldly across his mind. He shivered, drew the blanket over him, thought: How many shares? Six thousand? I can do it. I'll contact the broker in the morning. Six thousand at two hundred per. One million two hundred thousand dollars.

But that would raise the price, the attempt to buy so many shares. You can't buy a million plus in one stock without driving the price up--unless you manage to buy all the shares at once! If only he could persuade--psionically persuade--but he couldn't! It wasn't ethical.

His mind drifted.... I'll call the broker in the morning. Perhaps he can start picking up some of the independent shares when the market opens. If only he could snag the four thousand that--what was that name in Lawrence's mind?--yes, Redgrave! The four thousand that Redgrave has! That would be a start!

Redgrave had always fought Lawrence tooth and nail. Lawrence would derive vast personal satisfaction from seeing Redgrave an ex-stockholder. Thankless cad! Investment in the corporation had helped make Redgrave a very wealthy man. Lawrence stock was only part of his vast holdings. Redgrave was definitely out of the red!

Black chuckled, then told himself that this was a grave and not a laughing matter. Sleep was coming again.... Out of the red. Grave. Redgrave!

Five A.M. He awoke in a cold sweat.... This time the dream came back slowly, drenching him with fear as it came. It was sheer madness, this dream! To have even considered investing in Lawrence Applied Atomics! The Government would never condone the deal Lawrence was contemplating--the Applied Atomics Corporation was nearly insolvent, the BEB psis were investigating it....

Black tossed fitfully on the bed, seeking sleep desperately, seeking to escape the black night pressing in, to evade the imagined--or was it real?--probing minds of service psis.

Six A.M. He almost forgot the fears that had assailed him an hour before. He realized then that in the last few minutes or seconds or however long the latest transient phantasm had been in his mind he had dreamt of his broker pacing a dimly-lighted chamber, muttering, "The man's out of his mind. Economic instability, that's certain. Thinking of selling good stock to invest in Lawrence Applied Atomics! Not that Lawrence stock isn't fairly good, but he'll never make enough out of the corporation's piles; the returns are not that great!"
8 A.M. Black stretched, felt strangely relaxed. He realized then that as he had slept and, despite the fitfulness of his sleeping, his mind had apparently gone on analyzing the possible reactions to the big deal. He arose, took a shower, shaved, ate breakfast. Then he went to the visiphone and buttoned Charles Wythe, his broker, at his office.

"Charlie," Black said to the cadaverous looking man who answered. "Where's the boss?"
"Went to see a psychiatrist."
"Why?"
"I don't know. What's on your mind?"
"I want you to do some selling and buying for me. Sell whatever you like, but buy Lawrence Applied Atomics."
"Look, Marty, let's not go off half-cocked. Last year you had a sudden brainstorm and remember what happened. Lawrence may be a good stock, but it won't help you to build up to that thirty percent you need. Not in the time you have to do it in. It's bad enough for you to take a big licking once. Let's not be stupid again."
"Now, Charlie, don't be nasty. I want you to buy Lawrence as quietly as you can. I want six thousand shares at the current price. Get them for me."
"Are you shaken loose from your psyche or id or whatever?" Wythe cried. "Do it quietly, the man says, do it quietly! You can do it as quietly as they launched the space station. Where do you think I can get six thousand shares of Lawrence?"
"Why, you buy them!" Black answered innocently. "Isn't that what you do down at the Stock Exchange?"

The broker groaned. "Sure, that's all I do. Buy, that is. But not Lawrence. Look, Marty, see this chart? Yesterday was a big day for Lawrence Applied Atomics. It was unusually active. Three hundred shares changed hands. The day before it was one hundred. Once in my memory Lawrence had a four thousand share day. That must have been when Redgrave bought in. Now you tell me how I'm going to get you six thousand shares, get them quietly, and get them at the current price!"
"Start buying," Black said, "because I've got a hunch you'll find them. My mother had hunches, didn't she? Did she ever tell you or the boss to buy the wrong stocks? Did she--"
"That was your mother, Marty. What about that hunch you had last year, the one that cost you a couple of hundred thou--"
"That was last year!"
"So, what's changed?" asked Wythe.
"Maybe I've changed, Charlie. Do it; that's all I ask."
"Okay, Marty. But I think you're out of your mind, especially with what was on the morning news."
"And what was that?"
"Lawrence is in bad shape. He's not likely to pull through. They operated last night, in case you didn't know."
"But that should drive the stock down!"
"Why? It won't affect the profits from the corporation's piles."
"No. I agree. But that's not the only thing that keeps the price up. What about Lawrence's reputation?"
"Well, there's also a rumor about a government investigation of the corporation," Wythe admitted. "That might have some downward effect."
"Buy, Charlie, buy! I'll ring you later."

Black rang off. He felt an overwhelming confidence. He had only one small doubt in his mind--during or following one of those disturbing dreams had he been sufficiently overwrought to have relaxed his mental block, thereby letting in a fleeting probe from a service psi who would then have gleaned, in a moment, knowledge of the proposed transaction? The unease waned. The exuberant confidence was in him again. The prescience of Martha Black? He went out and caught a heli-cab to the law offices. He'd be a good trainee to the eyes and minds of anyone who might check. If the service psis were on his trail, he'd show them how good a trainee he was. He could check with Charlie Wythe later.

V

At 10 A.M., Standskill's partner, G. D. Rich left the office to attend court.

At ten-thirty A.M., a contact call came whispering to Black's mind. He thought it at first a probe and blocked part of his mind; then relaxed as it realized it was a psi asking with overbearing politeness for him to connect the visiphone circuit. The mental touch seemed somehow familiar, but it wasn't Joyce. He knew it wasn't Joyce; there was something unsure and tentative about the whisper of thought.

Black psionically cut in the outer office visiphone connection. The bell rang almost immediately. He switched on the inner office instrument and a familiar face came in sync on the screen--that of Peter Dodson, the principal administrative officer of the BEB psis.
Dodson's blondly handsome face showed concern. He said, "I wanted visiphone contact, Black, because of an unfavorable report I've received on you. I'll get to that in a minute. First, I'd like to explain the background. As you may have learned from the news this morning, we're investigating Lawrence Applied Atomics because of a tip we'd received from Los Angeles that Lawrence is engaged in a venture which will eventually affect corporation funds without proper advance authorization.

"Finding that Lawrence had some dealings with Standskill in the past, we thought that Standskill might be able to shed some light on the new venture. When we were unable to contact Standskill, we sought to contact you psionically last night, but found that your mind was a completely unreadable jumble of nightmares, filled with phobias and instabilities. We stopped probing then, realizing that you might be seriously ill."

Apparently visual examination had convinced Dodson that Black wasn't as ill as had been thought. Black felt the feather touch of a probe coming now and he blocked, his thin face expressionless.

"I did have a rather bad night," Black said. "Association. Semantic instability." He felt the tentacle of thought that was sweeping across his mind.

"Well," Dodson said, his eyes probing from the screen, "it's obvious you know nothing of the Lawrence deal. Strange, though, since there's a record of a call placed to that office by Lawrence yesterday, and as far as we have been able to determine only you were there and only you could have answered. How do you explain that?"

Easy now! The block is most difficult to maintain when you're lying. Easy....

"There was a call," Black admitted, "from someone I don't know, a fellow who wanted Standskill. Wouldn't say why or give his name. The moment I told him Standskill was in Paris he said with some reluctance that he would have to contact another law firm. The caller was probably Lawrence. If you could describe him--"

"So Standskill's in Paris! The answering service didn't know that. Well, that rules him out. Thank you, Black. Are you sure you're all right?"

"Rather tired," Black said. "Overwork, I expect. The training is rather strenuous, and I do wish you wouldn't probe. As you found in psi school, my powers have a very delicate balance."

The probe withdrew hastily.

"Sorry, Black. Very sorry. Perhaps you need a rest. I'll be only too glad to send through an order--"

"Oh, thank you, sir," Black said, trying to make it sound fervent and properly subservient. He sent a thought of thankfulness after his words, a weak one. He must not appear too strong.

Dodson rang off.

The coast was clear! They would not probe again soon!

Black immediately called Charles Wythe, found his broker's cadaverous face puzzled.

"Marty, the market's crazy! I managed to pick up four thousand shares within ten minutes after the market opened. One purchase. The broker from whom I obtained them represented Dan Redgrave--"

"Redgrave!" Black almost shouted.

"Yes, Redgrave. He said Redgrave is plain cuckoo. Ordered him to sell at one hundred fifty. Said he'd bought them at that and would sell them at that. No profit wanted. Glad to get out in time to recoup his original investment. What's cuckoo about it is that, except for the momentary flurry when we picked up the Redgrave shares, the stock has been rising all morning. It's up to two twenty-five as of this moment.

"Lawrence must have someone else buying regardless of the price. Three concerns are still trying to buy at the present price. Ethics forbids me to ask who their clients are. Not that they'd tell me anyway! Now, look, Marty, do you want me to buy at that price, if I can, that is?"

"Well, I must have six thousand, unless Lawrence is buying and I'm quite sure he isn't. See if you can find out who the buyer is, won't you?"

"Everybody's crazy today," the broker said. "I'll call you back."

Wythe did, a few minutes later.

"I'm afraid it's no use, Marty. There's not another share to be had. There's been news from the hospital. Lawrence has rallied. Although he's still in a coma, his chances are good for recovery. Not only that, but the Business Ethics Bureau has issued a statement to the effect that the tip they'd received about Lawrence and a deal has not been proved to have a foundation in fact. Those things have put the stock way up. Everybody wants to buy Lawrence but nobody wants to sell--except me! Let's sell, Marty!"

"Not on your life," Black said decisively. "And, look, we must get two thousand more shares! Get them, Charlie!"

He clicked off again.

So Dan Redgrave had sold at a ridiculously low price! Had his consciousness wandered in those dreams? Had he psionically persuaded Redgrave to sell? That wouldn't be ethical. But do ethics apply to involuntary acts?

His mind was in turmoil. He dared not exercise his psi powers again just now. He feared above all the wrath of
Dodson and the other service psis. If they came to suspect that he had persuaded Redgrave—that he had, according to Ethics, misused his powers ... he knew only too well that there are ways of banishing psi powers, insulin shock and other treatments.

And for all his present aloneness he was beginning to realize his latent powers—powers which, when fully developed, would doubtlessly bring him into contact with others like himself, with someone who could share the fierce ecstasy of probing with the consciousness to the moon, or even farther, at the speed of light at which thought moved. No, perhaps he need not always be alone....

He went out to lunch, returned, called his broker. Wythe told him there was no activity in Lawrence. The afternoon wore. A few minutes before the exchange closed the broker called.

"It's hopeless, Marty," said Wythe. "Let's sell. The price is still two twenty-five and nothing for sale. How about it? Three hundred thousand profit in one day."

It sounded attractive. Black hesitated, then thought of Lawrence, good, old would-be humanitarian and philanthropist D. V. Lawrence lying in coma. Lawrence, whose dreams were in his hands now. He had come to like Lawrence, the trail-blazer where there were so few trails to be blazed. He had to help him. If worse came to worse he would cast Ethics to the winds. He'd have to! His conscience couldn't permit him to do anything else. He would psionically persuade at least one of the other stockholders to vote Lawrence's way.

Well, at least his mind was made up. Lawrence would have his options. And with forty-nine percent of the stock between them they could gamble on getting a favorable vote.

"What about it, Marty?" the broker asked impatiently.

"Sorry," Black said. "The answer is no, Charlie! I want that stock."

He rang off.

Moments later his consciousness was on its way to keep the rendezvous with Joyce high in the evening sky over Oklahoma, up where the blue of the atmosphere turned to the black of infinity.

And moments later lights blazed over a table in a reality office in Los Angeles where no one sat. But pens lifted and wrote....

"D. V. Lawrence by Martin J. Black, his attorney-in-fact."

", J. F. Cadigan Realty Corporation by Richard Joyce, Vice-President."

Another pen lifted with the invisible but delicate twist of a feminine psi-touch.

"Before me this ninth day of September in the year Nineteen Hundred and Seventy-six Anno Domini psionically appeared...."

The options were psigned, come what may!

VI


And Bob Standskill!
What was Standskill doing here?
But the first vice-president had finished reading the proposal and was asking for a vote.

Lawrence—forty-five thousand shares--yes!
Maryk—twenty thousand shares--no!
Carrese—nine thousand shares--no!
Tonemont—seven thousand shares--no!
Black—four thousand shares--yes!
Turitz—five thousand shares--no!
And the smaller stockholders, one by one--no, no, no!
Forty-nine thousand shares--no! Forty-nine thousand shares--yes!

Black felt ill. His hovering consciousness almost fled from its invisible vantage point above the conference table back to the mansion on Riverside Drive, back where the memories of Martha Black remained.... But it wavered, stabilized....

Standskill rising, so implacable, so sure and saying, "Two thousand shares--yes!"

Black probed Standskill's mind almost involuntarily then, realizing instantly that he should have disregarded Ethics and probed before. Standskill was a psi, a non-service psi! And Black knew then that when his consciousness had flitted through association to Le Cheval Fatigué in Montmarte, Paris, and had fixed there for a brief unstable moment it had yielded to Standskill all knowledge of the Lawrence deal, persuading Standskill to order his brokers to buy the corporation's stock for the trust....

Black's consciousness sped to join Joyce's in a law office in Oklahoma. It watched the landowners signing the deeds even as it signed psionically the checks which represented the good and valuable considerations.
The deal was closed.

VII
Joyce, tell me--did you, to your knowledge, tip off the BEB psis?
Yes. Inadvertently, of course. I had a nightmare. I'm afraid I'm sometimes unstable, anonymously so, when asleep. Only then, though, thank Heaven!
And, Joyce, why aren't you in service?
For the same reason you can't be.
Confusion.
What do you mean?
Your mother knew.
My mother?
Yes, Marty, don't you realize that only unstable psis are taken into service? Stability is the mark of the superman. Do the majority of men want the minority--the supermen--running their world even though the supermen are their brothers, sisters and children? And they must surely realize that all mankind will evolve to psis one day. Marty, you were in psi school. So was I. Did you complete Stabilization?... I see you didn't. No psi does! They let you think you're getting away with something when you skip classes, but you're not!
Fortunately, if you are strong enough, you stabilize on your own. Perhaps you'll realize now that your mother gave you the incentive: the thirty percent angle, realizing that an uncle you definitely did not like would inherit if you didn't strive to the utmost. It worked.
They can't touch me, Marty, and they can't touch you! We can elude them mentally and physically. They know they can't touch us; so they just have to tolerate us! I can read in your mind that you've stabilized. You can fit physically now. Why don't you try? Lawrence is waiting....
Black's consciousness sped back to his body. His body lifted and sped to a hospital room.
Lawrence was awake. He viewed Black's materialization with incredulity.
"The deal is closed," Black said.
"But--you--" Lawrence stammered. "Closed?"
"Yes. And, considering the shares I hold, I guess that makes me something of a psilent partner of yours!"
A brash young man, Lawrence thought. A very brash young man!
Black grinned. Thirty percent? He couldn't miss!
They shook hands.
It was a deal. Pssigned, sealed and delivered!
THE MAROONER
By Charles A. Stearns

Wordsley and Captain DeCastros crossed half a universe--suffered hardship--faced unknown dangers; and all this for what--a breath of rare perfume?

Steadily they smashed the mensurate battlements, in blackness beyond night and darkness without stars. Yet Mr. Wordsley, the engineer, who was slight, balding and ingenious, was able to watch the firmament from his engine room as it drifted from bow to beam to rocket's end. This was by virtue of banked rows of photon collectors which he had invented and installed in the nose of the ship.

And Mr. Wordsley, at three minutes of the hour of seventeen over four, tuned in a white, new star of eye-blinking magnitude and surpassing brilliance. Discovering new stars was a kind of perpetual game with Mr. Wordsley. Perhaps more than a game.

"I wish I may, I wish I might ..." Mr. Wordsley said.

* * * * *

The fiddly hatch clanged. DeCastros, that gross, terrifying clown of a man, clumped down the ladder from the bridge to defeat the enchantment of the moment. DeCastros held sway. He was captain. He did not want Mr. Wordsley to forget that he was captain.

The worst of Captain DeCastros was that he had moods. Just now he was being a sly leprechaun, if one can imagine a double-chinned, three-hundred pound leprechaun. He came over and dug his fingers into Mr. Wordsley's shoulder. A wracking pain in the trapezius muscle.

"The ertholaters are plugged," he said gently. "The vi-lines are giving out a horrible stink."

"I'll attend to it right away," Mr. Wordsley said, wincing a little as he wriggled free.

"Tch, tch," DeCastros said, "can anyone really be so asthenic as you seem, Mr. Wordsley?"

"No, sir," Mr. Wordsley said, uncertain of his meaning.

The captain winked. "Yet there was that ruffled shirt that I found in the laundromat last week. It was not my shirt. There are only the two of us aboard, Mr. Wordsley."

"It was my shirt," Mr. Wordsley said, turning crimson. "I bought it on Vega Four. I--I didn't know--that is, they wear them like that on Vega Four."

"Yes, they do," DeCastros said. "Well, well, perhaps you are only a poet, Mr. Wordsley. But should you happen to be a little--well, maggoty, you positively do not have to tell me. No doubt we both have our secrets. Naturally."

"I haven't," Mr. Wordsley said desperately.

"No? Then you certainly will not mind that I am recommending an Ab Test for you when we get home."

Mr. Wordsley's heart stopped beating for several seconds. He searched Captain DeCastros' face for a sign that he might be fooling. He was not. He looked too pleasant. Mr. Wordsley had always managed to pass the Aberrations Test by the skin of his teeth, but he was sure that, like most spiritual geniuses, he was sensitively balanced, and that the power and seniority of a man like DeCastros must influence the Board of Examination.

"You might be decommed. Or even committed to an institution. We wouldn't want that to happen, would we, Mr. Wordsley?"

"Why are you doing this to me?" Mr. Wordsley asked strickenly.

"To tell the truth, I do not propose to have any more of my voyages blighted with your moon-calfing, day-dreaming and letting the ertholaters stink up the bridge. Besides--" Captain DeCastros patted his shoulder almost affectionately. "Besides, I can't stand you, Mr. Wordsley."

Mr. Wordsley nodded. He went over to the screen that was like a window of blessed outer night and sank down on his knees before it.

"Ah, ha!" DeCastros exclaimed with sudden ice frozen around the rim of his voice. "What have we here?"

"A new nova," Mr. Wordsley answered sullenly.

"It is common knowledge that no engineer can tell a nova from the D.R. blast of an Iphonian freighter. Let me see it." He shoved Mr. Wordsley out of the way and examined the screen intently.

"You fool," he said at last, "that's a planet. It is Avis Solis."

* * * * *
Now the name of Avis Solis tingled in Mr. Wordsley's unreliable memory, but it would not advance to be recognized. What planet so bright, and yet so remote from any star by angular measurement?

"Turn it off," DeCastros ordered.

Mr. Wordsley turned on him in a sudden fury. "It's mine," he cried. "I found it! Go back to your bridge." Then, aghast at what he had said, he clapped his hand over his mouth.

"Dear me," said Captain DeCastros silkily. Suddenly he seemed to go quite berserk. He snatched a pile-bar from its rack and swung it at the screen. The outer panel shattered. The screen went dead.

Mr. Wordsley grabbed at the bar and got hold of it at the expense of a broken finger. They strained and tugged. The slippery cadmium finally eluded both of them, bounded over the railing into the pit, struck a nomplate far below and was witheringly consumed in a flash of blue flame.

Then they were down and rolling over and over, clawing and gouging, until Captain DeCastros inevitably emerged upon top.

Mr. Wordsley's eyes protruded from that unbearable weight, and he wished that there was no such thing as artificial gravity. He struggled vainly. A bit of broken glass crunched beneath his writhing heel. He went limp and began to sob. It was not a very manly thing to do, but Mr. Wordsley was exercising his poetic license.

"Now then," said DeCastros, jouncing up and down a bit. "I trust that you have come to understand who is master of this ship, Mr. Wordsley?"

His addressee continued to weep silently.

After awhile it occurred to Captain DeCastros that what he was doing was expressly forbidden in the Rules of the Way, Section 90-G, and might, in fact, get him into a peck of trouble. So he got up, helped Mr. Wordsley to his feet, and began to brush him off.

In a kindly voice he said, "You must have heard of Avis Solis."

"I don't seem to remember it," Mr. Wordsley said.

"It's a solitaire. One of those planets which depend upon dark, dwarf, satellite suns for heat, you know. It is almost always in eclipse, and I, for one, have always been glad of it."

"Why is that?" said Mr. Wordsley, not really caring. His chest was giving him considerable pain.

"Because it holds the darkest of memories for me. I lost a brother on Avis Solis. Perhaps you have heard of him. Malmsworth DeCastros. He was quite famous for certain geological discoveries on Titan at one time."

"I don't think so."

"You need not be sorry. The wretch was a murderer and a bad sport as well. I need not append that my brother and I were as unlike as night and day--though there is no night and day proper upon Avis Solis, of course. I imagine you would like to hear the story. Then you will undoubtedly understand how it is that I was so upset a moment ago by the sight of Avis Solis, and forgive me."

Mr. Wordsley nodded. A birdlike, snake-charmed nod.

* * * * *

"Avis Solis is a planet absolutely unique, at least in this galaxy. In addition to being a solitaire, its surface is almost solidly covered to a depth of several meters with light-gathering layers of crystal which give it the brilliant, astral glow that you saw just now. Its satellite suns contribute hardly any light at all. It contains ample oxygen in its atmosphere, but hardly any water, and so is practically barren. An ill-advised mineralogical expedition brought us to Avis Solis."

"Us?" Mr. Wordsley said.

"There were six of us, five men and a woman. A woman fine and loyal and beautiful, with the body of a consummate goddess and the face of a tolerant angel. I was astrological surveyor and party chief."

"I didn't know that you were once a surveyor."

"It was seventeen years ago, and none of your business besides."

"What happened then?"

"Briefly, we were prospecting for ragnite, which was in demand at the time. We had already given up hopes of finding one gram of that mineral, but decided to make a last foray before blasting off. My brother, Malmsworth, stayed at our base camp. Poor Jenny--that was her name--remained behind to care for Malmsworth's lame ankle."

Captain DeCastros was lost for several minutes in a bleak and desolate valley of introspection wherein Mr. Wordsley dared not intrude. There was a certain grandeur about his great, dark visage, his falciform nose and meaty jowls as he stood there. Mr. Wordsley began to fidget and clear his throat.

DeCastros glared at him. "They were gone when we returned. Gone, I tell you! She, to her death. Malmsworth--well, we found him three hours later in the great rift which bisects the massive plateau that is the most outstanding feature of the regular surface of Avis Solis. At the end of this rift there is a natural cave that opens into the sheer wall of the plateau. Within it is a bottomless chasm. It was here that we found certain of Jenny's garments, but of
Jenny, naturally, there was no trace. He had seen to that."

"Terrible," Mr. Wordsley said.

DeCastros smiled reminiscently. "He fled, but we caught him. He really had a lame ankle, you know."

The mice of apprehension scampered up and down Mr. Wordsley's spine. "You killed him." It was a statement of certainty.

"No, indeed. That would have been too easy. We left him there with one portable water-maker and all of that unpalatable but nourishing fungus which thrives upon Avis Solis that he could eat. I have no doubt that he lived until madness reduced his ability to feed himself."

"That was drastic," Mr. Wordsley felt called upon to say. "Perhaps--perhaps it occurred to you later on that, in charity to your brother, the er--woman might not have been altogether blameless."

For a moment he thought that Captain DeCastros was about to strike him again. He did not. Instead he spat at Mr. Wordsley. He had the speed of a cobra. There was not time to get out of the way. Mr. Wordsley employed a handkerchief on his face.

"She was my wife, you know, Mr. Wordsley," Captain DeCastros said pleasantly.

At nineteen-over-four the contamination buzzers sounded their dread warning.

* * * * *

Mr. Wordsley got the alarm first. He had been furtively repairing the viewscreen and thinking dark thoughts the while. There was sick dread for him in the contemplation of the future, for after this last unfortunate blunder DeCastros would be certain to keep his promise and have him examined. This might very well be his last voyage, and Mr. Wordsley had known for quite a long time that he could not live anywhere except out here in the void.

Only in space, where the stars were like diamonds. Not in the light of swirling, angry, red suns, not upon the surface of any planet, so drab when you drew too near. Only in the sterile purity of remote space where he could maintain and nourish the essential purity of his day-dreams. But of course one could not explain this to the Board of Examiners; least of all to Captain DeCastros.

Moreover, he was afraid that Avis Solis, which he had been permitted to behold for only a few seconds, would be out of range before he got the scanner to working again. The aspect of this magnificent gem diminishing forever into the limitless night brought a lump to his throat.

But then, at last, the screen came alive once more, and there it loomed, more brilliant than ever, now so huge that it filled the screen, and it had not become drab, neither gray-green or brown. No, it was cake frosting, and icicles, and raindrops against the sun, and all of the bright, unattainable Christmas tree ornaments of his childhood.

So rapt was he that he scarcely heard the alarm. Yet he responded automatically to the sound that now sent him scrambling into his exposure suit. He fitted one varium-protected oxy-tank to his helmet and tucked another one under his arm for Captain DeCastros.

This was superfluous, for DeCastros not only had donned his rig; he had managed to recall to memory a few dozen vile, degrading swear words gleaned from the sin-pits of Marronn, to hurl at Mr. Wordsley.

No one could have helped it, really. Ships under the Drive are insulated from contamination clouds and everything else in normal space. The substance polluting the ventilation system, therefore, must have been trapped within their field since Vega. Now it had entered the ship through some infinitesimal opening in the hull.

It was the engineer's job to find that break. It was not easy, especially with DeCastros breathing down one's neck. Mr. Wordsley began to perspire heavily, and the moisture ran down and puddled in his boots.

An hour passed that was like an age. The prognosis became known and was not reassuring. This was one of the toxic space viruses, dormant at absolute zero, but active under shipboard conditions. A species, in fact, of the dread, oxygen-eating dryorus, which multiplies with explosive rapidity, and kills upon penetration of the human respiratory system.

Because of the leak in the hull, the decontaminators could not even hold their own. Mr. Wordsley shuddered to note that ominous, rust-colored cobwebs--countless trillions of dryori--already festooned the stringers of the hull.

Another precious hour was taken from them. Mr. Wordsley emerged wearily from the last inspection hole.

"Well?" DeCastros snapped. "Well--well?" His face was greenish from the effects of the special, contamination resistant mixture that they were breathing.

"I found the leak," Mr. Wordsley said.

"Did you fix it?"

"It was one of the irmium alloy plugs in the outer hull beneath the pile. They were originally placed there, I believe, for the installation of a radiation tester. The plug is missing, and I am sorry to say that we have no extras. Anything other than irmium would melt at once, of course."

"We have less than eight hours of pure air in the tanks," DeCastros said. "Have you thought of that, you rattle-
"Yes, sir," Mr. Wordsley said. "And if I might be allowed to speculate, Captain, I would say that we are finished unless we can make a planetfall. Only then would I be able to remove the lower port tube, weld the cavity, seal the ship and fumigate."

"We're four weeks from the nearest star, Fomalhaut; you know that as well as I do."

"I was thinking," said Mr. Wordsley, with a sudden, suffused glow in his cheeks, "of Avis Solis."

Mr. Wordsley shut his eyes as they were going down, because he wanted to open them and surprise himself, at the moment of landing. But the cold, white glare was more intense than he had expected, and he had to shut them again and turn on the polarizer.

He buckled on his tools and the carbo-torch, and went down the ladder. He dropped at once to his knees, not because of the gravity, which was not bad, but because of a compulsion to get his face as near to the surface of Avis Solis as possible. It was even lovelier than when seen from space. He trod upon a sea of diamonds. A million tiny winkings and scintillations emanated from each crystal. A million crystals lay beneath the sole of his boot. He would rather not have stepped on them, but it could not be helped. They were everywhere. Mr. Wordsley gloated.

* * * * *

DeCastros dropped like a huge slug from the ladder behind him. "What are you doing?" he said. "Picnicking?"

"I was tying my shoe," Mr. Wordsley said, and got to work with an alacrity that was wholly false.

The dark sun-satellites rose by twos and threes over the horizon, felt rather than clearly seen. There was a dry wind that blew from the glittering wasteland and whistled around the base of the rockets as Mr. Wordsley labored on and on.

Captain DeCastros had withdrawn to a level outcropping of igneous rock and sat staring at the nothing where the greenish-black sky met the pale gray horizon.

The tube was loosened on its shackles and presently fell, with a tinkling sound, upon the surface of Avis Solis. The opening was sealed and welded. Mr. Wordsley was practically finished, but he did not hurry. Instead, he went around to the opposite side of the ship on a pretense of inspection, and sat down where DeCastros could not see him.

For awhile he stared at the many-faceted depths of the crystals; then he leaned over and touched them with his lips. They were smooth and exciting. They cut his lip.

But he had the distinct feeling that there was something wrong with this idyll. It seemed to him that he was being spied upon. He sneaked a furtive glance behind him. DeCastros was still sitting where he had been, with his back to him.

Mr. Wordsley slowly lifted his gaze to the plateau of shimmering glass that was before him. At its rim, a hundred feet above him, a silent figure stood gazing down upon him.

* * * * *

A man even six feet tall might easily have frightened Mr. Wordsley into a nervous breakdown by staring at him with that gaunt, hollow-eyed stare, but this creature, though manlike, was fully fifty feet tall, incredibly elongated, and stark naked. Its hair was long and matted; its cheeks sunken, its lips pulled back in an expression which might have been anything from a smile to a cannibalistic snarl.

Mr. Wordsley cried out.

Captain DeCastros heard and came running across the intervening distance with swiftness incredible in one of his bulk at this gravity. His blizzer was out. It was one of the very latest models of blizzers. Very destructive. Mr. Wordsley had always been afraid to touch it.

He fired, and part of the plateau beneath the titan's feet fell away in a sparkling shower. The creature vanished. DeCastros was red-faced and wheezing. "That was Malmsworth," he said. "Now how the devil do you suppose he managed to stick it out all these years!"

"If that was Malmsworth," Mr. Wordsley said, "he must be a very tall man."

"That was merely dimensional mirage. Come along. We'll have to hurry if we catch him."

"Why do we want to catch him?" Mr. Wordsley said.

Captain DeCastros made a sound of sober surprise. Even of pious wonder. "Malmsworth is my only brother," he said.

Mr. Wordsley wanted to say, "Yes, but you shot at him." He did not, because there was no time. He had to hurry to catch up with DeCastros, who was even now scrambling up the steep slope.

From the rim they could see Malmsworth out there on the flat. He was making good time, but Captain DeCastros proceeded to demonstrate that he was no mean hiker, himself. Mr. Wordsley's side began to hurt, and his breath came with difficulty. He might have died, if he had not feared to incur DeCastros' anger.

At times the naked man was a broad, flat monster upon that shimmering tableland. Again he seemed almost invisible; then gigantic and tenuous.
Presently he disappeared altogether.

"Oho!" DeCastros said, "If I am not mistaken, old Malmsworth has holed up in that very same rift where we caught him at his dirty business seventeen years ago. He's as mad as a Martian; you can lay to that. He'd have to be."

The rift, when they arrived at its upper reaches, was cool and shadowy. In its depths nothing sparkled. It was ordinary limestone. The walls were covered with a dull yellow moss, except for great, raw wounds where it had been torn off.

"That's Malmsworth's work," Captain DeCastros said. "In seventeen years, Mr. Wordsley, one will consume a lot of moss, I daresay. Shall we descend?"

The rift had reached its depth quite gradually, so that Mr. Wordsley scarcely realized that they were going down until the surface glare was suddenly gone, and the green-walled gloom surrounded them. It might have been a pleasant place, but Mr. Wordsley did not like it.

Captain DeCastros was taking his time now, resting frequently. There was not the slightest chance of Malmsworth's getting away, for at the other end of the rift lay the cave and the abyss containing, at least, one ghost of Malmsworth's terrible past.

But though it might seem drab after the plateau and the plain, the rift had its points of interest. Along the walls, everywhere, as high as a tall man might reach, the moss had been torn or scraped from the surface. There was no second growth.

* * * * *

Every quarter of a mile or so they came upon the former campsites of the castaway, each marked by a flat-topped cairn of small stones three or four feet in height. DeCastros was at a loss to explain this. Mr. Wordsley supposed that it was one of the marks of a diseased mind.

Not that he actually understood the workings of a diseased mind. Privately, he suspected that DeCastros was a little mad. Certainly he was subject to violent, unreasonable tempers which could not be explained. The unfortunate strain might have cropped up more strongly in his brother.

Might not these walls have rung with lunatic screams after months and years of hollow-eyed watching for the ship that never came? It might have been different, of course, had Malmsworth been able to appreciate the aesthetic values of life, as Mr. Wordsley did. But doubtless these lovely miles and miles of crystalline oceans had been but a desert to the castaway.

Eventually the rift widened a little, and they came to a dead end, beyond which lay the cave. It must have been formed ages ago by trickling waters before Avis Solis lost its clouds and rivers.

Here they found the last of the cairns, and the answer to their construction. The water-maker which the expedition had left with Malmsworth seventeen years ago rested upon this neat platform, and below it a delicate basin, eighteen inches or so in depth, had been constructed of stones and chinked with moss. Fit monument for the god, machine.

It was filled with water, and quite obviously a bathtub.

* * * * *

Captain DeCastros sneered. This proved beyond doubt that Malmsworth was mad, for in the old days he had been the very last to care about his bath. In fact, DeCastros said, Malmsworth occasionally stank.

This was probably not true, but it seemed curious, nonetheless.

Captain DeCastros set to work kicking the tub to pieces. He kicked so hard that one stone whistled past the head of Mr. Wordsley, who ducked handily. Soon the basin lay in rubble, and the water-maker, its supports collapsed, listed heavily to the right.

"He must be in the cave," Captain DeCastros said. He cupped his hands to his mouth. "Come out, Malmsworth, we know you're in there!"

But there was no answer, and Malmsworth did not come out, so Captain DeCastros, blizzer in hand, went in, with Mr. Wordsley following at a cautious interval.

Presently they stood upon the edge of something black and yawning, but there was still no sign of the exile, who seemed, like Elijah, to have been called directly to his Maker without residue.

Beyond the gulf, however, Mr. Wordsley had glimpsed a ragged aperture filled with the purest light. It seemed inconceivable to him--attracted as he had always been by radiance--that this should be inaccessible.

Accordingly, he lay down upon his belly and stretched his hand as far down as he could reach. His fingers brushed a level surface which appeared to extend outwards for two or three feet. Gingerly he lowered himself to this ledge and began to feel his way along the wall. Nor was he greatly surprised (for hardly anything surprised Mr. Wordsley any more) that it neatly circumnavigated the pit and deposited him safely upon the other side, where he quickly groped toward the mouth of the cavern and stood gazing out upon a scene that was breathtaking.

From this vantage the easily accessible slope led to the foot of the plateau. Beyond lay the grandeur of Avis
Captain DeCastros was soon beside him. "A very clever trick, that ledge," he said. "Malmsworth thinks to elude us, but he never shall, eh, Mr. Wordsley?" There were tears of frustration in his eyes.

It embarrassed Mr. Wordsley, who could only point to the pall of gleaming dust where their ship had lain, and to the silver needle which glinted for a moment in the sky and was gone.

"Malmsworth would not do that to me," Captain DeCastros said. But he had.

* * * * *

"We may be here quite a long while," Mr. Wordsley said, and could not contrive to sound downhearted about it.

But Captain DeCastros had already turned away and was feeling his way back along the ledge.

Mr. Wordsley waited just a moment longer; then he took from his pocket a heavy object and dropped it upon the slope and it rolled over and over, down and down, until its metallic sheen was lost in that superior glare.

It was a spare irmium alloy plug.

He made his way back to the water-maker. They would have to take good care of it from now on.

He was not concerned with the basin. However, in the soft, damp sand beside the basin, plainly imprinted there, as if someone's raiding party had interrupted someone's bathing party, there remained a single, small and dainty footprint.

One could almost imagine that a faint breath of perfume still lingered upon the sheltered air of the rift, but, of course, only things which glittered interested Mr. Wordsley.

THE END
By July 1, 1916, the war had involved every civilized nation upon the globe except the United States of North and of South America, which had up to that time succeeded in maintaining their neutrality. Belgium, Holland, Denmark, Switzerland, Poland, Austria Hungary, Lombardy, and Servia, had been devastated. Five million adult male human beings had been exterminated by the machines of war, by disease, and by famine. Ten million had been crippled or invalided. Fifteen million women and children had been rendered widows or orphans. Industry there was none. No crops were harvested or sown. The ocean was devoid of sails. Throughout European Christendom women had taken the place of men as field hands, labourers, mechanics, merchants, and manufacturers. The amalgamated debt of the involved nations, amounting to more than $100,000,000,000, had bankrupted the world. Yet the starving armies continued to slaughter one another.

Siberia was a vast charnel-house of Tartars, Chinese, and Russians. Northern Africa was a holocaust. Within sixty miles of Paris lay an army of two million Germans, while three million Russians had invested Berlin. In Belgium an English army of eight hundred and fifty thousand men faced an equal force of Prussians and Austrians, neither daring to take the offensive.

The inventive genius of mankind, stimulated by the exigencies of war, had produced a multitude of death-dealing mechanisms, most of which had in turn been rendered ineffective by some counter-invention of another nation. Three of these products of the human brain, however, remained unneutralized and in large part accounted for the impasse at which the hostile armies found themselves. One of these had revolutionized warfare in the field, and the other two had destroyed those two most important factors of the preliminary campaign—the aeroplane and the submarine. The German dirigibles had all been annihilated within the first ten months of the war in their great cross-channel raid by Pathé contact bombs trailed at the ends of wires by high-flying French planes. This, of course, had from the beginning been confidently predicted by the French War Department. But by November, 1915, both the allied and the German aerial fleets had been wiped from the clouds by Federston's vortex guns, which by projecting a whirling ring of air to a height of over five thousand feet crumpled the craft in mid-sky like so many butterflies in a simoon.

The second of these momentous inventions was Captain Barlow's device for destroying the periscopes of submarines, thus rendering them blind and helpless. Once they were forced to the surface such craft were easily destroyed by gun fire or driven to a sullen refuge in protecting harbours.

The third, and perhaps the most vital, invention was Dufay's nitrogen-iodide pellets, which when sown by pneumatic guns upon the slopes of a battlefield, the ground outside intrenchments, or round the glacis of a fortification made approach by an attacking army impossible and the position impregnable. These pellets, only the size of No. 4 bird shot and harmless out of contact with air, became highly explosive two minutes after they had been scattered broadcast upon the soil, and any friction would discharge them with sufficient force to fracture or dislocate the bones of the human foot or to put out of service the leg of a horse. The victim attempting to drag himself away inevitably sustained further and more serious injuries, and no aid could be given to the injured, as it was impossible to reach them. A field well planted with such pellets was an impassable barrier to either infantry or cavalry, and thus any attack upon a fortified position was doomed to failure. By surprise alone could a general expect to achieve a victory. Offensive warfare had come almost to a standstill.

Germany had seized Holland, Denmark, and Switzerland. Italy had annexed Dalmatia and the Trentino; and a new Slav republic had arisen out of what had been Hungary, Croatia, Bosnia, Herzegovina, Servia, Roumania, Montenegro, Albania, and Bulgaria. Turkey had vanished from the map of Europe; while the United States of South America, composed of the Spanish-speaking South American Republics, had been formed. The mortality continued at an average of two thousand a day, of which 75 per cent. was due to starvation and the plague. Maritime commerce had ceased entirely, and in consequence of this the merchant ships of all nations rotted at the docks.

The Emperor of Germany, and the kings of England and of Italy, had all voluntarily abdicated in favour of a republican form of government. Europe and Asia had run amuck, hysterical with fear and blood. As well try to pacify a pack of mad and fighting dogs as these frenzied myriads with their half-crazed generals. They lay, these armies, across the fair bosom of the earth like dying monsters, crimson in their own blood, yet still able to writhe upward and deal death to any other that might approach. They were at a deadlock, yet each feared to make the first overtures for peace. There was, in actuality, no longer even an English or a German nation. It was an orgy of
homicide, in which the best of mankind were wantonly destroyed, leaving only the puny, the feeble-minded, the deformed, and the ineffectual to perpetuate the race.

I

It was three minutes past three postmeridian in the operating room of the new Wireless Station recently installed at the United States Naval Observatory at Georgetown. Bill Hood, the afternoon operator, was sitting in his shirt sleeves with his receivers at his ears, smoking a corncob pipe and awaiting a call from the flagship Lincoln of the North Atlantic Patrol with which, somewhere just off Hatteras, he had been in communication a few moments before. The air was quiet.

Hood was a fat man, and so of course good-natured; but he was serious about his work and hated all interfering amateurs. Of late these wireless pests had become particularly obnoxious, as practically everything was sent out in code and they had nothing with which to occupy themselves. But it was a hot day and none of them seemed to be at work. On one side of his desk a tall thermometer indicated that the temperature of the room was 91 degrees Fahrenheit; on the other a big clock, connected with some extraneous mechanism by a complicated system of brass rods and wires, ticked off the minutes and seconds with a peculiar metallic self-consciousness, as if aware of its own importance in being the official timepiece, as far as there was an official timepiece, for the entire United States of America.

Hood from time to time tested his converters and detector, and then resumed his non-official study of the adventures of a great detective who pursued the baffling criminal by the aid of all the latest scientific discoveries. Hood thought it was good stuff, although at the same time he knew, of course, that it was rot. He was a practical man of little imagination, and, though the detective did not interest him particularly, he liked the scientific part of the stories. He was thrifty, of Scotch-Irish descent, and at two minutes past three had never had an adventure in his life. At three minutes past three he began his career as one of the celebrities of the world.

As the minute hand of the official clock dropped into its slot somebody called the Naval Observatory. The call was so faint as to be barely audible, in spite of the fact that Hood's instrument was tuned for a three-thousand-metre wave. Supposing quite naturally that the person calling had a shorter wave, he gradually cut out the inductance of his receiver; but the sound faded out entirely, and he returned to his original inductance and shunted in his condenser, upon which the call immediately increased in volume. Evidently the other chap was using a big wave, bigger than Georgetown.

Hood puckered his brows and looked about him. Lying on a shelf above his instrument was one of the new ballast coils that Henderson had used with the long waves from lightning flashes, and he leaned over and connected the heavy spiral of closely wound wire, throwing it into his circuit. Instantly the telephones spoke so loud that he could hear the shrill cry of the spark even from where the receivers lay beside him on the table. Quickly fastening them to his ears he listened. The sound was clear, sharp, and metallic, and vastly higher in pitch than a ship's call. It couldn't be the Lincoln.

"By gum!" muttered Hood. "That fellow must have a twelve-thousand-metre wave length with fifty kilowatts behind it, sure! There ain't another station in the world but this can pick him up!"

"NAA--NAA--NAA," came the call.

Throwing in his rheostat he sent an "O.K" in reply, and waited expectantly, pencil in hand. A moment more and he dropped his pencil in disgust.

"Just another bug!" he remarked aloud to the thermometer. "Ought to be poisoned! What a whale of a wave length, though!"

For several minutes he listened intently, for the amateur was sending insistently, repeating everything twice as if he meant business.

"He's a jolly joker all right," muttered Hood, this time to the clock. "Must be pretty hard up for something to do!"

Then he laughed out loud and took up the pencil again. This amateur, whoever he was, was almost as good as his detective story. The "bug" called the Naval Observatory once more and began repeating his entire message for the third time.

"To all mankind"--he addressed himself modestly--"To all mankind--I am the dictator--of human destiny--Through the earth's rotation--I control--day and night--summer and winter--I command the cessation of hostilities and--the abolition of war upon the globe--I appoint the--United States--as my agent for this purpose--As evidence of my power I shall increase the length of the day--from midnight to midnight--of Thursday, July 22d, by the period of five minutes.--PAX."

The jolly joker, having repeated thus his extraordinary message to all mankind, stopped sending.

"Well, I'll be hanged!" gasped Bill Hood. Then he wound up his magnetic detector and sent an answering challenge into the ether.
"Can--the--funny--stuff!" he snapped. "And tune out--or--we'll revoke--your license!"

"What a gall!" he grunted, folding up the yellow sheet of pad paper upon which he had taken down the message to all mankind and thrusting it into his book for a marker. "All the fools aren't dead yet!"

Then he picked up the Lincoln and got down to real work. The "bug" and his message passed from memory.

II

The following Thursday afternoon a perspiring and dusty stranger from St. Louis, who, with the Metropolitan Art Museum as his objective, was trudging wearily through Central Park, New York City, at two o'clock, paused to gaze with some interest at the obelisk known as Cleopatra's Needle. The heat rose in shimmering waves from the asphalt of the roadway, but the stranger was used to heat and he was conscientiously engaged in the duty of seeing New York. Opposite the Museum he seated himself upon a bench in the shade of a faded dogwood and wiped the moisture from his eyes. The glare from the unprotected boulevards was terrific. Under these somewhat unfavourable conditions he was occupied in studying the monument of Egypt's past magnificence when he felt a slight dragging sensation. It was indefinable and had no visual concomitant. But it was as though the brakes were being gently applied to a Pullman train. He was the only human being in the neighbourhood; not even a policeman was visible; and the experience gave him a creepy feeling. Then to his amazement Cleopatra's Needle slowly toppled from its pedestal and fell with a crash across the roadway. At first he thought it an optical illusion and wiped his eyes again, but it was nothing of the kind. The monument, which had a moment before pointed to the zenith, now lay shattered in three pieces upon the softening concrete of the drive. The stranger arose and examined the fragments of the monolith, one of which lay squarely across the road, barring all passage. Round the pedestal were scattered small pieces of broken granite, and from these, after looking about cautiously, he chose one with care and placed it in his pocket.

"Gosh!" he whispered to himself as he hurried toward Fifth Avenue. "That'll just be something to tell 'em at home! Eh, Bill?"

The dragging sensation experienced by the tourist from St. Louis was felt by many millions of people all over the world, but, as in most countries it occurred coincidently with pronounced earthquake shocks and tremblings, for the most part it passed unnoticed as a specific, individual phenomenon.

Hood, in the wireless room at Georgetown, suddenly heard in his receivers a roar like that of Niagara and quickly removed them from his ears. He had never known such statics. He was familiar with electrical disturbances in the ether, but this was beyond anything in his experience. Moreover, when he next tried to use his instruments he discovered that something had put the whole apparatus out of commission. About an hour later he felt a pronounced pressure in his eardrums, which gradually passed off. The wireless refused to work for nearly eight hours, and it was still recalcitrant when he went off duty at seven o'clock. He had not felt the quivering of the earth round Washington, and being an unimaginative man he accepted the other facts of the situation philosophically. The statics would pass, and then Georgetown would be in communication with the rest of the world again, that was all. At seven o'clock the night shift came in, and Hood borrowed a pipeful of tobacco from him and put on his coat.

"Say, Bill, did you feel the shock?" asked the shift, hanging up his hat and taking a match from Hood.

"No," answered the latter, "but the statics have put the machine on the blink. She'll come round all right in an hour or so. The air's gummy with ions. Shook, did you say?"

"Sure. Had 'em all over the country. Say, the boys at the magnetic observatory claim their compass shifted east and west instead of north and south, and stayed that way for five minutes. Didn't you feel the air pressure? I should worry! And say, I just dropped into the Meteorological Department's office and looked at the barometer. She'd jumped up half an inch in about two seconds, wiggled round some, and then come back to normal. You can see the curve yourself if you ask Fraser to show you the self-registering barograph. Some doin's, I tell you!"

He nodded his head with an air of importance.

"Take your word for it," answered Hood without emotion, save for a slight annoyance at the other's arrogation of superior information. "'Tain't the first time there's been an earthquake since creation." And he strolled out, swinging to the doors behind him.

The night shift settled himself before the instruments with a look of dreary resignation.

"Say," he muttered aloud, "you couldn't jar that feller with a thirteen-inch bomb! He wouldn't even rub himself!"

Hood, meantime, bought an evening paper and walked slowly to the district where he lived. It was a fine night and there was no particular excitement in the streets. His wife opened the door.

"Well," she greeted him, "I'm glad you've come home at last. I was plumb scared something had happened to you. Such a shaking and rumbling and rattling I never did hear! Did you feel it?"

"I didn't feel nothin'!" answered Bill Hood. "Some one said there was a shock, that was all I heard about it. The machine's out of kilter."
"They won't blame you, will they?" she asked anxiously.
"You bet they won't!" he replied. "Look here, I'm hungry. Are the waffles ready?"
"Have 'em in a jiffy!" she smiled. "You go in and read your paper."

He did as he was directed, and seated himself in a rocker under the gaslight. After perusing the baseball news he turned back to the front page. The paper was a fairly late edition, containing up-to-the-minute telegraphic notes. In the centre column, alongside the announcement of the annihilation of three entire regiments of Silesians by the explosion of nitroglycerine concealed in dummy gun carriages, was the following:

CLEOPATRA'S NEEDLE FALLS
EARTHQUAKE DESTROYS FAMOUS MONUMENT
SHOCKS FELT HERE AND ALL OVER U. S.

Washington was visited by a succession of earthquake shocks early this afternoon, which, in varying force, were felt throughout the United States and Europe. Little damage was done, but those having offices in tall buildings had an unpleasant experience which they will not soon forget. A peculiar phenomenon accompanying this seismic disturbance was the variation of the magnetic needle by over eighty degrees from north to east and an extraordinary rise and fall of the barometer. All wireless communication had to be abandoned, owing to the ionizing of the atmosphere, and up to the time this edition went to press had not been resumed. Telegrams by way of Colon report similar disturbances in South America. In New York the monument in Central Park known as Cleopatra's Needle was thrown from its pedestal and broken into three pieces. The contract for its repair and replacement has already been let. The famous monument was a present from the Khedive of Egypt to the United States, and formerly stood in Alexandria. The late William H. Vanderbilt defrayed the expense of transporting it to this country.

Bill Hood read this with scant interest. The Giants had knocked the Braves' pitcher out of the box, and an earthquake seemed a small matter. His mind did not once revert to the mysterious message from Pax the day before. He was thinking of something far more important.

"Say, Nellie," he demanded, tossing aside the paper impatiently, "ain't those waffles ready yet?"

III

On that same evening, Thursday, July 22d, two astronomers attached to the Naval Observatory sat in the half darkness of the meridian-circle room watching the firmament sweep slowly across the aperture of the giant lens. The chamber was as quiet as the grave, the two men rarely speaking as they noted their observations. Paris might be taken, Berlin be razed, London put to the torch; a million human beings might be blown into eternity, or the shrieks of mangled creatures lying in heaps before pellet-strewed barbed-wire entanglements rend the summer night; great battleships of the line might plunge to the bottom, carrying their crews with them; and the dead of two continents rot unburied—yet unmoved the stars would pursue their nightly march across the heavens, cruel day would follow pitiless night, and the careless earth follow its accustomed orbit as though the race were not writhing in its death agony. Gazing into the infinity of space human existence seemed but the scum upon a rainpool, human warfare but the frenzy of insectivora. Unmindful of the starving hordes of Paris and Berlin, of plague-swept Russia, or of the drowned thousands of the North Baltic Fleet, these two men calmly studied the procession of the stars—the onward bore of the universe through space, and the spectra of newborn or dying worlds.

It was a suffocatingly hot night and their foreheads reeked with sweat. Dim shapes on the walls of the room indicated what by day was a tangle of clockwork and recording instruments, connected by electricity with various buttons and switches upon the table. The brother of the big clock in the wireless operating room hung nearby, its face illuminated by a tiny electric lamp, showing the hour to be eleven-fifty. Occasionally the younger man made a remark in a low tone, and the elder wrote something on a card.

"The 'seeing' is poor to-night," said Evarts, the younger man. "The upper air is full of striae and, though it seems like a clear night, everything looks dim—a volcanic haze probably. Perhaps the Aleutian Islands are in eruption again."

"Very likely," answered Thornton, the elder astronomer. "The shocks this afternoon would indicate something of the sort."

"Curious performance of the magnetic needle. They say it held due east for several minutes," continued Evarts, hoping to engage his senior in conversation—almost an impossibility, as he well knew.

Thornton did not reply. He was carefully observing the infinitesimal approach of a certain star to the meridian line, marked by a thread across the circle's aperture. When that point of light should cross the thread it would be midnight, and July 22, 1916, would be gone forever. Every midnight the indicating stars crossed the thread exactly on time, each night a trifle earlier than the night before by a definite and calculable amount, due to the march of the earth around the sun. So they had crossed the lines in every observatory since clocks and telescopes had been invented. Heretofore, no matter what cataclysm of nature had occurred, the star had always crossed the line not a second too soon or a second too late, but exactly on time. It was the one positively predictable thing, foretellable for
ten or for ten thousand years by a simple mathematical calculation. It was surer than death or the tax-man. It was absolute.

Thornton was a reserved man of few words--impersonal, methodical, serious. He spent many nights there with Evarts, hardly exchanging a phrase with him, and then only on some matter immediately concerned with their work. Evarts could dimly see his long, grave profile bending over his eyepiece, shrouded in the heavy shadows across the table. He felt a great respect, even tenderness, for this taciturn, high-principled, devoted scientist. He had never seen him excited, hardly ever aroused. He was a man of figures, whose only passion seemed to be the "music of the spheres."

A long silence followed, during which Thornton seemed to bend more intently than ever over his eyepiece. The hand of the big clock slipped gradually to midnight.

"There's something wrong with the clock," said Thornton suddenly, and his voice sounded curiously dry, almost unnatural. "Telephone to the equatorial room for the time."

Puzzled by Thornton's manner Evarts did as instructed.

"Forty seconds past midnight," came the reply from the equatorial observer.

Evarts repeated the answer for Thornton's benefit, looking at their own clock at the same time. It pointed to exactly forty seconds past the hour. He heard Thornton suppress something like an oath.

"There's something the matter!" repeated Thornton dumbly. "Aeta isn't within five minutes of crossing. Both clocks can't be wrong!"

He pressed a button that connected with the wireless room.

"What's the time?" he called sharply through the nickel-plated speaking-tube.

"Forty-five seconds past the hour," came the answer. Then: "But I want to see you, sir. There's something queer going on. May I come in?"

"Come!" almost shouted Thornton.

A moment later the flushed face of Williams, the night operator, appeared in the doorway.

"Excuse me, sir," he stammered, "but something fierce must have happened! I thought you ought to know. The Eiffel Tower has been trying to talk to us for over two hours, but I can't get what he's saying."

"What's the matter--atmospherics?" snapped Evarts.

"No; the air was full of them, sir--shrieking with them you might say; but they've stopped now. The trouble has been that I've been jammed by the Brussels station talking to the Belgian Congo--same wave length--and I couldn't tune Brussels out. Every once in a while I'd get a word of what Paris was saying, and it's always the same word--'heure.' But just now Brussels stopped sending and I got the complete message of the Eiffel Tower. They wanted to know our time by Greenwich. I gave it to 'em. Then Paris said to tell you to take your transit with great care and send result to them immediately----"

The ordinarily calm Thornton gave a great suspiration and his face was livid. "Aeta's just crossed--we're five minutes out! Evarts, am I crazy? Am I talking straight?"

Evarts laid his hand on the other's arm.

"The earthquake's knocked out your transit," he suggested.

"And Paris--how about Paris?" asked Thornton. He wrote something down on a card mechanically and started for the door. "Get me the Eiffel Tower!" he ordered Williams.

The three men stood motionless, as the wireless man sent the Eiffel Tower call hurtling across the Atlantic:

"ETA--ETA--ETA."

"All right," whispered Williams, "I've got 'em."

"Tell Paris that our clocks are all out five minutes according to the meridian."

Williams worked the key rapidly, and then listened.

"The Eiffel Tower says that their chronometers also appear to be out by the same time, and that Greenwich and Moscow both report the same thing. Wait a minute! He says that Moscow has wired that at eight o'clock last evening a tremendous aurora of bright yellow light was seen to the northwest, and that their spectrosopes showed the helium line only. He wants to know if we have any explanation to offer----"

"Explanation!" gasped Evarts. "Tell Paris that we had earthquake shocks here together with violent seismic movements, sudden rise in barometer, followed by fall, statics, and erratic variation in the magnetic needle."

"What does it all mean?" murmured Thornton, staring blankly at the younger man.

The key rattled and the rotary spark whined into a shriek. Then silence.

"Paris says that the same manifestations have been observed in Russia, Algeria, Italy, and London," called out Williams. "Ah! What's that? Nauen's calling." Again he sent the blue flame crackling between the coils. "Nauen reports an error of five minutes in their meridian observations according to the official clocks. And hello! He says Berlin has capitulated and that the Russians began marching through at daylight--that is about two hours ago. He
Evarts whistled.
"How about it?" he asked of Thornton.
The latter shook his head gravely.
"It may be--explainable--or," he added hoarsely, "it may mean the end of the world."
Williams sprang from his chair and confronted Thornton.
"What do you mean?" he almost shouted.
"Perhaps the universe is running down!" said Evarts soothingly. "At any rate, keep it to yourself, old chap. If
the jig is up there's no use scaring people to death a month or so too soon!"
Thornton grasped an arm of each.
"Not a word of this to anybody!" he ground out through compressed lips. "Absolute silence, or hell may break
loose on earth!"

IV
Free translation of the Official Report of the Imperial Commission of the Berlin Academy of Science to the
Imperial Commissioners of the German Federated States:
The unprecedented cosmic phenomena which occurred on the 22d and 27th days of the month of July, and
which were felt over the entire surface of the globe, have left a permanent effect of such magnitude on the position
of the earth's axis in space and the duration of the period of the rotation, that it is impossible to predict at the present
time the ultimate changes or modifications in the climatic conditions which may follow. This commission has
considered most carefully the possible causes that may have been responsible for this catastrophe--(Weltunfall)--and
by eliminating every hypothesis that was incapable of explaining all of the various disturbances, is now in a position
to present two theories, either one of which appears to be capable of explaining the recent disturbances.

The phenomena in question may be briefly summarized as follows;
1. THE YELLOW AURORA. In Northern Europe this appeared suddenly on the night of July 22d as a broad,
faint sheaf--(Lichtbündel)--of clear yellow light in the western sky. Reports from America show that at Washington
it appeared in the north as a narrow shaft of light, inclined at an angle of about thirty degrees with the horizon, and
shooting off to the east. Near the horizon it was extremely brilliant, and the spectroscope showed that the light was
due to glowing helium gas.
The Potsdam Observatory reported that the presence of sodium has been detected in the aurora; but this appears
to have been a mistake due to the faintness of the light and the circumstance that no comparison spectrum was
impressed on the plate. On the photograph made at the Washington Observatory the helium line is certain, as a
second exposure was made with a sodium flame; and the two lines are shown distinctly separated.
2. THE NEGATIVE ACCELERATION. This phenomenon was observed to a greater or less extent all over the
globe. It was especially marked near the equator; but in Northern Europe it was noted by only a few observers,
though many clocks were stopped and other instruments deranged. There appears to be no doubt that a force of
terrific magnitude was applied in a tangential direction to the surface of the earth, in such a direction as to oppose its
axial rotation, with the effect that the surface velocity was diminished by about one part in three hundred, resulting
in a lengthening of the day by five minutes, thirteen and a half seconds.
The application of this brake--(Bremsekraft), as we may term it--caused acceleration phenomena to manifest
themselves precisely as on a railroad train when being brought to a stop. The change in the surface speed of the earth
at the equator has amounted to about 6.4 kilometres an hour; and various observations show that this change of
velocity was brought about by the operation of the unknown force for a period of time of less than three minutes.
The negative acceleration thus represented would certainly be too small to produce any marked physiological
sensations, and yet the reports from various places indicate that they were certainly observed. The sensations felt are
usually described as similar to those experienced in a moving automobile when the brake is very gently applied.
Moreover, certain destructive actions are reported from localities near the equator--chimneys fell and tall
buildings swayed; while from New York comes the report that the obelisk in Central Park was thrown from its
pedestal. It appears that these effects were due to the circumstance that the alteration of velocity was propagated
through the earth as a wave similar to an earthquake wave, and that the effects were cumulative at certain points--a
theory that is substantiated by reports that at certain localities, even near the equator, no effects were noted.
3. TIDAL WAVES. These were observed everywhere and were very destructive in many places. In the Panama
Canal, which is near the equator and which runs nearly east and west, the sweep of the water was so great that it
flowed over the Gatun Lock. On the eastern coasts of the various continents there was a recession of the sea, the fall
of the tide being from three to five metres below the low-water mark. On the western coasts there was a
corresponding rise, which in some cases reached a level of over twelve metres.
That the tidal phenomena were not more marked and more destructive is a matter of great surprise, and has
been considered as evidence that the retarding force was not applied at a single spot on the earth's surface, but was a
distributed force, which acted on the water as well as on the land, though to a less extent. It is difficult, however, to
conceive of a force capable of acting in such a way; and Björnson's theory of the magnetic vortex in the ether has
been rejected by this commission.

4. ATMOSPHERIC DISTURBANCES. Some time after the appearance of the yellow aurora a sudden rise in
atmospheric pressure, followed by a gradual fall considerably below the normal pressure, was recorded over the
entire surface of the globe. Calculations based on the time of arrival of this disturbance at widely separated points
show that it proceeded with the velocity of sound from a point situated probably in Northern Labrador. The
maximum rise of pressure recorded was registered at Halifax, the self-recording barographs showing that the
pressure rose over six centimetres in less than five minutes.

5. SHIFT IN DIRECTION OF THE EARTH'S AXIS. The axis of the earth has been shifted in space by the
disturbance and now points almost exactly toward the double star Delta Ursæ Minoris. This change appears to have
resulted from the circumstance that the force was applied to the surface of the globe in a direction not quite parallel
to the direction of rotation, the result being the development of a new axis and a shift in the positions of the poles,
which it will now be necessary to rediscover.

It appears that these most remarkable cosmic phenomena can be explained in either of two ways: they may
have resulted from an explosive or volcanic discharge from the surface of the earth, or from the oblique impact of a
meteoric stream moving at a very high velocity. It seems unlikely that sufficient energy to bring about the observed
changes could have been developed by a volcanic disturbance of the ordinary type; but if radioactive forces are
allowed to come into play the amount of energy available is practically unlimited.

It is difficult, however, to conceive of any way in which a sudden liberation of atomic energy could have been
brought about by any terrestrial agency; so that the first theory, though able to account for the facts, seems to be the
less tenable of the two. The meteoric theory offers no especial difficulty. The energy delivered by a comparatively
small mass of finely divided matter, moving at a velocity of several hundred kilometres a second--and such a
velocity is by no means unknown--would be amply sufficient to alter the velocity of rotation by the small amount
observed.

Moreover, the impact of such a meteoric stream may have developed a temperature sufficiently high to bring
about radioactive changes, the effect of which would be to expel helium and other disintegration products at
cathode-ray velocity--(Kathoden-Strahlen-Fortpflanzung-Geschwindigkeit)--from the surface of the earth; and the
recoil exerted by this expulsion would add itself to the force of the meteoric impact.

The presence of helium makes this latter hypothesis not altogether improbable, while the atmospheric wave of
pressure would result at once from the disruption of the air by the passage of the meteor stream through it.
Exploration of the region in which it seems probable that the disturbance took place will undoubtedly furnish the
data necessary for the complete solution of the problem.” [Pp. 17-19.]

V

At ten o'clock one evening, shortly after the occurrences heretofore described, an extraordinary conference
occurred at the White House, probably the most remarkable ever held there or elsewhere. At the long table at which
the cabinet meetings took place sat six gentlemen in evening dress, each trying to appear unconcerned, if not
amused. At the head of the table was the President of the United States; next to him Count von Koenitz, the German
Ambassador, representing the Imperial[1] German Commissioners, who had taken over the reins of the German
Government after the abdication of the Kaiser; and, on the opposite side, Monsieur Emil Liban, Prince Rostoloff,
and Sir John Smith, the respective ambassadors of France, Russia, and Great Britain. The sixth person was
Thornton, the astronomer.

[Footnote 1: The Germans were unwilling to surrender the use of the words "Empire" and "Imperial," even
after they had adopted a republican form of government.]

The President had only succeeded in bringing this conference about after the greatest effort and the most skilful
diplomacy--in view of the extreme importance which, he assured them all, he attached to the matters which he
desired to lay before them. Only for this reason had the ambassadors of warring nations consented to meet--
unofficially as it were.

"With great respect, your Excellency," said Count von Koenitz, "the matter is preposterous--as much so as a
fairy tale by Grimm! This wireless operator of whom you speak is lying about these messages. If he received them at
all--a fact which hangs solely upon his word--he received them after and not before the phenomena recorded."

The President shook his head. "That might hold true of the first message--the one received July 19th," said he,
"but the second message, foretelling the lengthening of July 27th, was delivered on that day, and was in my hands
before the disturbances occurred."

Von Koenitz fingered his moustache and shrugged his shoulders. It was clear that he regarded the whole affair
as absurd, undignified.

Monsieur Liban turned impatiently from him.

"Your Excellency," he said, addressing the President, "I cannot share the views of Count von Koenitz. I regard this affair as of the most stupendous importance. Messages or no messages, extraordinary natural phenomena are occurring which may shortly end in the extinction of human life upon the planet. A power which can control the length of the day can annihilate the globe."

"You cannot change the facts," remarked Prince Rostoloff sternly to the German Ambassador. "The earth has changed its orbit. Professor Vaskofsky, of the Imperial College, has so declared. There is some cause. Be it God or devil, there is a cause. Are we to sit still and do nothing while the globe's crust freezes and our armies congeal into corpses?" He trembled with agitation.

"Calm yourself, mon cher Prince!" said Monsieur Liban. "So far we have gained fifteen minutes and have lost nothing! But, as you say, whether or not the sender of these messages is responsible, there is a cause, and we must find it."

"But how? That is the question," exclaimed the President almost apologetically, for he felt, as did Count von Koenitz, that somehow an explanation would shortly be forthcoming that would make this conference seem the height of the ridiculous. "I have already," he added hastily, "instructed the entire force of the National Academy of Sciences to direct its energies toward the solution of these phenomena. Undoubtedly Great Britain, Russia, Germany, and France are doing the same. The scientists report that the yellow aurora seen in the north, the earthquakes, the variation of the compass, and the eccentricities of the barometer are probably all connected more or less directly with the change in the earth's orbit. But they offer no explanation. They do not suggest what the aurora is nor why its appearance should have this effect. It, therefore, seems to me clearly my duty to lay before you all the facts as far as they are known to me. Among these facts are the mysterious messages received by wireless at the Naval Observatory immediately preceding these events."

"Post hoc, ergo propter hoc!" half sneered Von Koenitz.

The President smiled wearily.

"What do you wish me to do?" he asked, glancing round the table. "Shall we remain inactive? Shall we wait and see what may happen?"

"No! No!" shouted Rostoloff, jumping to his feet. "Another week and we may all be plunged into eternity. It is suicidal not to regard this matter seriously. We are sick from war. And perhaps Count von Koenitz, in view of the fall of Berlin, would welcome something of the sort as an honourable way out of his country's difficulties."

"Sirs!" cried the count, leaping to his feet. "Have a care! It has cost Russia four million men to reach Berlin. When we have taken Paris we shall recapture Berlin and commence the march of our victorious eagles toward Moscow and the Winter Palace."

"Gentlemen! Gentlemen! Be seated, I implore you!" exclaimed the President.

The Russian and German ambassadors somewhat ungraciously resumed their former places, casting at each other glances of undisguised contempt.

"As I see the matter," continued the President, "there are two distinct propositions before you: The first relates to how far the extraordinary events of the past week are of such a character as to demand joint investigation and action by the Powers. The second involves the cause of these events and their connection with and relation to the sender of the messages signed Pax. I shall ask you to signify your opinion as to each of these questions."

"I believe that some action should be taken, based on the assumption that they are manifestations of one and the same power or cause," said Monsieur Liban emphatically.

"I agree with the French Ambassador," growled Rostoloff.

"I am of opinion that the phenomena should be the subject of proper scientific investigation," remarked Count von Koenitz more calmly. "But as far as these messages are concerned they are, if I may be pardoned for saying so, a foolish joke. It is undignified to take any cognizance of them."

"What do you think, Sir John?" asked the President, turning to the English Ambassador.

"Before making up my mind," returned the latter quietly, "I should like to see the operator who received them."

"By all means!" exclaimed Von Koenitz.

The President pressed a button and his secretary entered.

"I had anticipated such a desire on the part of all of you," he announced, "and arranged to have him here. He is waiting outside. Shall I have him brought in?"

"Yes! Yes!" answered Rostoloff. And the others nodded.

The door opened, and Bill Hood, wearing his best new blue suit and nervously twisting a faded bicycle cap between his fingers, stumbled awkwardly into the room. His face was bright red with embarrassment and one of his cheeks exhibited a marked protuberance. He blinked in the glare of the electric light.
"Mr. Hood," the President addressed him courteously, "I have sent for you to explain to these gentlemen, who are the ambassadors of the great European Powers, the circumstances under which you received the wireless messages from the unknown person describing himself as 'Pax.'"

Hood shifted from his right to his left foot and pressed his lips together. Von Koenitz fingered the waxed ends of his moustache and regarded the operator whimsically.

"In the first place," went on the President, "we desire to know whether the messages which you have reported were received under ordinary or under unusual conditions. In a word, could you form any opinion as to the whereabouts of the sender?"

Hood scratched the side of his nose in a manner politely doubtful.

"Sure thing, your Honour," he answered at last. "Sure the conditions was unusual. That feller has some juice and no mistake."

"Juice?" inquired Von Koenitz.

"Yare--current. Whines like a steel top. Fifty kilowatts sure, and maybe more! And a twelve-thousand-metre wave."

"I do not fully understand," interjected Rostoloff. "Please explain, sir."

"Ain't nothin' to explain," returned Hood. "He's just got a hell of a wave length, that's all. Biggest on earth. We're only tuned for a three-thousand-metre wave. At first I could hardly take him at all. I had to throw in our new Henderson ballast coils before I could hear properly. I reckon there ain't another station in Christendom can get him."

"Ah," remarked Von Koenitz. "One of your millionaire amateurs, I suppose."

"Yare," agreed Hood. "I thought sure he was a nut."

"A what?" interrupted Sir John Smith.

"A nut," answered Hood. "A crank, so to speak."

"Ah, 'krank!" nodded the German. "Exactly--a lunatic! That is precisely what I say!"

"But I don't think it's no nut now," countered Hood vauntly. "If he is a bug he's the biggest bug in all creation, that's all I can say. He's got the goods, that's what he's got. He'll do some damage before he gets through."

"Are these messages addressed to anybody in particular?" inquired Sir John, who was studying Hood intently.

"Well, they are and they ain't. Pax--that's what he calls himself--signals NAA, our number, you understand, and then says what he has to say to the whole world, care of the United States. The first message I thought was a joke and stuck it in a book I was reading, 'Silas Snooks'----"

"What?" ejaculated Von Koenitz impatiently.

"Snooks--man's name--feller in the book--nothing to do with this business," explained the operator. "I forgot all about it. But after the earthquake and all the rest of the fuss I dug it out and gave it to Mr. Thornton. Then on the 27th came the next one, saying that Pax was getting tired of waiting for us and was going to start something. That came at one o'clock in the afternoon, and the fun began at three sharp. The whole observatory went on the blink. Say, there ain't any doubt in your minds that it's him, is there?"

Von Koenitz looked cynically round the room.

"There is not!" exclaimed Rostoloff and Liban in the same breath.

The German laughed.

"Speak for yourselves, Excellencies," he sneered. His tone nettled the wireless representative of the sovereign American people.

"Do you think I'm a liar?" he demanded, clenching his jaw and glaring at Von Koenitz.

The German Ambassador shrugged his shoulders again. Such things were impossible in a civilized country--at Potsdam--but what could you expect----

"Steady, Hood!" whispered Thornton.

"Remember, Mr. Hood, that you are here to answer our questions," said the President sternly. "You must not address his Excellency, Baron von Koenitz, in this fashion."

"But the man was making a monkey of me!" muttered Hood. "All I say is, look out. This Pax is on his job and means business. I just got another call before I came over here--at nine o'clock."

"What was its purport?" inquired the President.

"Why, it said Pax was getting tired of nothing being done and wanted action of some sort. Said that men were dying like flies, and he proposed to put an end to it at any cost. And--and----"

"Yes! Yes!" ejaculated Liban breathlessly.

"And he would give further evidence of his control over the forces of nature to-night."

"Ha! Ha!" Von Koenitz leaned back in amusement. "My friend," he chuckled, "you--are--the 'nut'!"

What form Hood's resentment might have taken is problematical; but as the German's words left his mouth the
electric lights suddenly went out and the windows rattled ominously. At the same moment each occupant of the room felt himself sway slightly toward the east wall, on which appeared a bright yellow glow. Instinctively they all turned to the window which faced the north. The whole sky was flooded with an orange-yellow aurora that rivalled the sunlight in intensity.

"What'd I tell you?" mumbled Hood.

The Executive Mansion quivered, and even in that yellow light the faces of the ambassadors seemed pale with fear. And then as the glow slowly faded in the north there floated down across the aperture of the window something soft and fluffy like feathers. Thicker and faster it came until the lawn of the White House was covered with it. The air in the room turned cold. Through the window a large flake circled and lit on the back of Rostoloff's head.

"Snow!" he cried. "A snowstorm--in August!"

The President arose and closed the window. Almost immediately the electric lights burned up again.

"Now are you satisfied?" cried Liban to the German.

"Satisfied?" growled Von Koenitz. "I have seen plenty of snowstorms in August. They have them daily in the Alps. You ask me if I am satisfied. Of what? That earthquakes, the aurora borealis, electrical disturbances, snowstorms exist--yes. That a mysterious bugaboo is responsible for these things--no!"

"What, then, do you require?" gasped Liban.

"More than a snowstorm!" retorted the German. "When I was a boy at the gymnasium we had a thunderstorm with fishes in it. They were everywhere one stepped, all over the ground. But we did not conclude that Jonah was giving us a demonstration of his power over the whale."

He faced the others defiantly; in his voice was mockery.

"You may retire, Mr. Hood," said the President. "But you will kindly wait outside."

"That is an honest man if ever I saw one, Mr. President," announced Sir John, after the operator had gone out.

"I am satisfied that we are in communication with a human being of practically supernatural powers."

"What, then, shall we be done?" inquired Rostoloff anxiously. "The world will be annihilated!"

"Your Excellencies"--Von Koenitz arose and took up a graceful position at the end of the table--"I must protest against what seems to me to be an extraordinary credulity upon the part of all of you. I speak to you as a rational human being, not as an ambassador. Something has occurred to affect the earth's orbit. It may result in a calamity. None can foretell. This planet may be drawn off into space by the attraction of some wandering world that has not yet come within observation. But one thing we know: No power on or of the earth can possibly derange its relation to the other celestial bodies. That would be, as you say here, 'lifting one's self by one's own boot-straps.' I do not doubt the accuracy of your clocks and scientific instruments. Those of my own country are in harmony with yours. But to say that the cause of all this is a man is preposterous. If the mysterious Pax makes the heavens fall, they will tumble on his own head. Is he going to send himself to eternity along with the rest of us? Hardly! This Hood is a monstrous liar or a dangerous lunatic. Even if he has received these messages, they are the emanations of a crank, as, he says, he himself first suspected. Let us master this hysteria born of the strain of constant war. In a word, let us go to bed."

"Count von Koenitz," replied Sir John after a pause, "you speak forcefully, even persuasively. But your argument is based upon a proposition that is scientifically fallacious. An atom of gunpowder can disintegrate itself, 'lift itself by its own boot-straps!' Why not the earth? Have we as yet begun to solve all the mysteries of nature? Is it inconceivable that there should be an undiscovered explosive capable of disrupting the globe? We have earthquakes. Is it beyond imagination that the forces which produce them can be controlled?"

"My dear Sir John," returned Von Koenitz courteously, "my ultimate answer is that we have no adequate reason to connect the phenomena which have disturbed the earth's rotation with any human agency."

"That," interposed the President, "is something upon which individuals may well differ. I suppose that under other conditions you would be open to conviction?"

"Assuredly," answered Von Koenitz. "Should the sender of these messages prophesy the performance of some miracle that could not be explained by natural causes, I would be forced to admit my error."

Monsieur Liban had also arisen and was walking nervously up and down the room. Suddenly he turned to Von Koenitz and in a voice shaking with emotion cried: "Let us then invite Pax to give us a sign that will satisfy you."

"Monsieur Liban," replied Von Koenitz stiffly, "I refuse to place myself in the position of communicating with a lunatic."

"Very well," shouted the Frenchman, "I will take the responsibility of making myself ridiculous. I will request the President of the United States to act as the agent of France for this purpose."

He drew a notebook and a fountain pen from his pocket and carefully wrote out a message which he handed to the President. The latter read it aloud:

"Pax: The Ambassador of the French Republic requests me to communicate to you the fact that he desires some
further evidence of your power to control the movements of the earth and the destinies of mankind, such phenomena to be preferably of a harmless character, but inexplicable by any theory of natural causation. I await your reply.

"THE PRESIDENT OF THE UNITED STATES."

"Send for Hood," ordered the President to the secretary who answered the bell. "Gentlemen, I suggest that we ourselves go to Georgetown and superintend the sending of this message."

Half an hour later Bill Hood sat in his customary chair in the wireless operating room surrounded by the President of the United States, the ambassadors of France, Germany, Great Britain, and Russia, and Professor Thornton. The faces of all wore expressions of the utmost seriousness, except that of Von Koenitz, who looked as if he were participating in an elaborate hoax. Several of these distinguished gentlemen had never seen a wireless apparatus before, and showed some excitement as Hood made ready to send the most famous message ever transmitted through the ether. At last he threw over his rheostat and the hum of the rotary spark rose into its staccato song. Hood sent out a few V's and then began calling:

"PAX--PAX--PAX."

Breathlessly the group waited while he listened for a reply. Again he called:

"PAX--PAX--PAX."

He had already thrown in his Henderson ballast coils and was ready for the now familiar wave. He closed his eyes, waiting for that sharp metallic cry that came no one knew whence. The others in the group also listened intently, as if by so doing they, too, might hear the answer if any there should be. Suddenly Hood stiffened.

"There he is!" he whispered. The President handed him the message, and Hood's fingers played over the key while the spark sent its singing note through the ether.

"Such phenomena to be preferably of a harmless character, but inexplicable by any theory of natural causation," he concluded.

An uncanny dread seized on Thornton, who had withdrawn himself into the background. What was this strange communion? Who was this mysterious Pax? Were these real men or creatures of a grotesque dream? Was he not drowsing over his eyepiece in the meridian-circle room? Then a simultaneous movement upon the part of those gathered round the operator convinced him of the reality of what was taking place. Hood was laboriously writing upon a sheet of yellow pad paper, and the ambassadors were unceremoniously crowding each other in their eagerness to read.

"To the President of the United States," wrote Hood: "In reply to your message requesting further evidence of my power to compel the cessation of hostilities within twenty-four hours, I!--there was a pause for nearly a minute, during which the ticking of the big clock sounded to Thornton like revolver shots--"I will excavate a channel through the Atlas Mountains and divert the Mediterranean into the Sahara Desert. PAX."

Silence followed the final transcription of the message from the unknown--a silence broken only by Bill Hood's tremulous, half-whispered: "He'll do it all right!"

Then the German Ambassador laughed.

"And thus save your ingenious nation a vast amount of trouble, Monsieur Liban," said he.

VI

A Tripolitan fisherman, Mohammed Ben Ali el Bad, a holy man nearly seventy years of age, who had twice made the journey to Mecca and who now in his declining years occupied himself with reading the Koran and instructing his grandsons in the profession of fishing for mullet along the reefs of the Gulf of Capes, had anchored for the night off the Tunisian coast, about midway between Sfax and Lesser Syrits. The mullet had been running thick and he was well satisfied, for by the next evening he would surely complete his load and be able to return home to the house of his daughter, Fatima, the wife of Abbas, the confectioner. Her youngest son, Abdullah, a lithe lad of seventeen, was at that moment engaged in folding their prayer rugs, which had been spread in the bow of the falukah in order that they might have a clearer view as they knelt toward the Holy City. Chud, their slave, was cleaning mullet in the waist and chanting some weird song of his native land.

Mohammed Ben Ali el Bad was sitting cross-legged in the stern, smoking a hookah and watching the full moon sail slowly up above the Atlas Range to the southwest. The wind had died down and the sea was calm, heaving slowly with great orange-purple swells resembling watered silk. In the west still lingered the fast-fading afterglow, above which the stars glimmered faintly. Along the coast lights twinkled in scattered coves. Half a mile astern the Italian cruiser Fiala lay slowly swinging at anchor. From the forecastle came the smell of fried mullet. Mohammed Ben Ali was at peace with himself and with the world, including even the irritating Chud. The west darkened and the stars burned more brilliantly. With the hookah gurgling softly at his feet, Mohammed leaned back his head and gazed in silent appreciation at the wonders of the heavens. There was Turka Kabar, the crocodile; and Menish el Tabir, the sleeping beauty; and Rook Hamana, the leopard, and there--up there to the far north--was a shooting star. How gracefully it shot across the sky, leaving its wake of yellow light behind it! It was the season for shooting stars,
he recollected. In an instant it would be gone--like a man's life! Saddened, he looked down at his hookah. When he should look up again--if in only an instant--the star would be gone. Presently he did look up again. But the star was still there, coming his way!

He rubbed his old eyes, keen as they were from habituation to the blinding light of the desert. Yes, the star was coming--coming fast.

"Abdullah!" he called in his high-pitched voice. "Chud! Come, see the star!"
Together they watched it sweep onward.

"By Allah! That is no star!" suddenly cried Abdullah. "It is an air-flying fire chariot! I can see it with my eyes--black, and spouting flames from behind."

"Black," echoed Chud gutturally. "Black and round! Oh, Allah!" He fell on his knees and knocked his head against the deck.

The star, or whatever it was, swung in a wide circle toward the coast, and Mohammed and Abdullah now saw that what they had taken to be a trail of fire behind was in fact a broad beam of yellow light that pointed diagonally earthward. It swept nearer and nearer, illuminating the whole sky and casting a shimmering reflection upon the waves.

A shrill whistle trilled across the water, accompanied by the sound of footsteps running along the decks of the cruiser. Lights flashed. Muffled orders were shouted.

"By the beard of the Prophet!" cried Mohammed Ali. "Something is going to happen!"

The small black object from which the incandescent beam descended passed at that moment athwart the face of the moon, and Abdullah saw that it was round and flat like a ring. The ray of light came from a point directly above it, passing through its aperture downward to the sea.

"Boom!" The fishing-boat shook to the thunder of the Fiala's eight-inch gun, and a blinding spurt of flame leaped from the cruiser's bows. With a whining shriek a shell rose toward the moon. There was a quick flash followed by a dull concussion. The shell had not reached a tenth of the distance to the flying machine.

And then everything happened at once. Mohammed described afterward to a gaping multitude of dirty villagers, while he sat enthroned upon his daughter's threshold, how the star-ship had sailed across the face of the moon and come to a standstill above the mountains, with its beam of yellow light pointing directly downward so that the coast could be seen bright as day from Sfax to Cabes. He saw, he said, genii climbing up and down on the beam. Be that as it may, he swears upon the Beard of the Prophet that a second ray of light--of a lavender colour, like the eye of a long-dead mullet--flashed down alongside the yellow beam. Instantly the earth blew up like a cannon--up into the air, a thousand miles up. It was as light as noonday. Deafened by titanic concussions he fell half dead. The sea boiled and gave off thick clouds of steam through which flashed dazzling discharges of lightning accompanied by a thundering, grinding sound like a million mills. The ocean heaved spasmodically and the air shook with a rending, ripping noise, as if Nature were bent upon destroying her own handiwork. The glare was so dazzling that sight was impossible. The falukah was tossed this way and that, and he was rolled hither and yon in the company of Chud, Abdullah, and the headless mullet.

This earsplitting racket continued, he says, without interruption for two days. Abdullah says it was several hours; the official report of the Fiala gives it as six minutes. And then it began to rain in torrents until he was almost drowned. A great wind arose and lashed the ocean, and a whirlpool seized the falukah and whirled it round and round. Darkness descended upon the earth, and in the general mess Mohammed hit his head a terrific blow against the mast. He was sure it was but a matter of seconds before they would be dashed to pieces by the waves. The falukah spun like a marine top with a swift sideways motion. Something was dragging them along, sucking them in. The Fiala went careening by, her fighting masts hanging in shreds. The air was full of falling rocks, trees, splinters, and thick clouds of dust that turned the water yellow in the lightning flashes. The mast went crashing over and a lemon tree descended to take its place. Great streams of lava poured down out of the air, and masses of opaque matter plunged into the sea all about the falukah. Scalding mud, stones, hail, fell upon the deck.

And still the fishing-boat, gyrating like a leaf, remained afloat with its crew of half-crazed Arabs. Suffocated, stunned, scalded, petrified with fear, they lay among the mullet while the falukah raced along in its wild dance with death. Mohammed recalls seeing what he thought to be a great cliff rush by close beside them. The falukah plunged over a waterfall and was almost submerged, was caught again in a maelstrom, and went twirling on in the blackness. They all were deathly sick, but were too terrified to move.

And then the nearer roaring ceased. The air was less congested. They were still showered with sand, clods of earth, twigs, and pebbles, it is true, but the genii had stopped hurling mountains at each other. The darkness became less opaque, the water smoother. Soon they could see the moon through the clouds of settling dust, and gradually they could discern the stars. The falukah was rocking gently upon a broad expanse of muddy ocean, surrounded by a yellow scum broken here and there by a floating tree. The Fiala had vanished. No light shone upon the face of the
The light was thrown from outside and above instead of from inside the flying machine, but the explanation may be apparently be moved at will over a limited radius of about fifteen degrees. We could not understand this, nor why this appliance, which we supposed to be a gigantic searchlight, was focused down through the Ring and could tube of the cylinder looked to be about twenty feet thick, and had circular windows or portholes that were brilliantly constructed, I believe, of highly polished metal, the inner aperture being about twenty-five yards in diameter. The thousand feet, if as great as that, and we could see that it was a cylindrical ring like a doughnut or an anchor ring, it we discovered that it was a new sort of flying machine. It passed over our heads at a height no greater than ten expected to be moving upward toward the zenith, instead of in a direction parallel to the earth. It looked somehow as us, since a normal comet or other celestial body that left a wake of light of that sort behind it would naturally be coming straight toward us. Instead, however, of leaving a horizontal trail of fire behind it, this comet or meteorite so the tail of the comet had been bent over. As soon as it came near enough so that we could focus the telescope upon Franciscans by Count Philippe d'Ormay, when Father Antoine called my attention to a comet that was apparently the Consular Correspondence for 1915-1916. After describing general conditions in Algeria he continues: Department at Washington, where it is now on file. [See Vol. 27, pp. 491-498, with footnote, of Official Records of abbot of the Franciscan monastery at Linares, sent the following account of the flight of the Ring to the State VII

Within twenty-four hours of the destruction of the Mountains of Atlas by the Flying Ring and the consequent flooding of the Sahara, the official gazettes and such newspapers as were still published announced that the Powers had agreed upon an armistice and accepted a proposition of mediation on the part of the United States looking toward permanent peace. The news of the devastation and flood caused by this strange and terrible dreadnought of the air created the profoundest apprehension and caused the wildest rumours, for what had happened in Tunis was assumed as likely to occur in London, Paris, or New York. Wireless messages flashed the story from Algiers to Cartagena, and it was thence disseminated throughout the civilized world by the wireless stations at Paris, Nauen, Moscow, and Georgetown.

The fact that the rotation of the earth had been retarded was still a secret, and the appearance of the Ring had not as yet been connected with any of the extraordinary phenomena surrounding it; but the newspaper editorials universally agreed that whatever nation owned and controlled this new instrument of war could dictate its own terms. It was generally supposed that the blasting of the mountain chain of Northern Africa had been an experiment to test and demonstrate the powers of this new demoniacal invention, and in view of its success it did not seem surprising that the nations had hastened to agree to an armistice, for the Power that controlled a force capable of producing such an extraordinary physical cataclysm could annihilate every capital, every army, every people upon the globe or even the globe itself.

The flight of the Ring machine had been observed at several different points, beginning at Cape Race, where at about four A.M. the wireless operator reported what he supposed to be a large comet discharging earthward a diagonal shaft of orange-yellow light and moving at incredible velocity in a southeasterly direction. During the following day the lookout on the Vira, a fishguard and scout cruiser of the North Atlantic Patrol, saw a black speck soaring among the clouds which he took to be a lost monoplane fighting to regain the coast of Ireland. At sundown an amateur wireless operator at St. Michael's in the Azores noted a small comet sweeping across the sky far to the north. This comet an hour or so later passed directly over the cities of Lisbon, Linares, Lorca, Cartagena, and Algiers, and was clearly observable from Badajoz, Almadén, Seville, Cordova, Grenada, Oran, Biskra, and Tunis, and at the latter places it was easily possible for telescopic observers to determine its size, shape, and general construction.

Daniel W. Quinn, Jr., the acting United States Consul stationed at Biskra, who happened to be dining with the abbot of the Franciscan monastery at Linares, sent the following account of the flight of the Ring to the State Department at Washington, where it is now on file. [See Vol. 27, pp. 491-498, with footnote, of Official Records of the Consular Correspondence for 1915-1916.] After describing general conditions in Algeria he continues:

We had gone upon the roof in the early evening to look at the sky through the large telescope presented to the Franciscans by Count Philippe d'Ormay, when Father Antoine called my attention to a comet that was apparently coming straight toward us. Instead, however, of leaving a horizontal trail of fire behind it, this comet or meteorite seemed to shoot an almost vertical beam of orange light toward the earth. It produced a very strange effect on all of us, since a normal comet or other celestial body that left a wake of light of that sort behind it would naturally be expected to be moving upward toward the zenith, instead of in a direction parallel to the earth. It looked somehow as if the tail of the comet had been bent over. As soon as it came near enough so that we could focus the telescope upon it we discovered that it was a new sort of flying machine. It passed over our heads at a height no greater than ten thousand feet, if as great as that, and we could see that it was a cylindrical ring like a doughnut or an anchor ring, constructed, I believe, of highly polished metal, the inner aperture being about twenty-five yards in diameter. The tube of the cylinder looked to be about twenty feet thick, and had circular windows or portholes that were brilliantly lighted.

The strangest thing about it was that it carried a superstructure consisting of a number of arms meeting at a point above the centre of the opening and supporting some sort of apparatus from which the beam of light emanated. This appliance, which we supposed to be a gigantic searchlight, was focused down through the Ring and could apparently be moved at will over a limited radius of about fifteen degrees. We could not understand this, nor why the light was thrown from outside and above instead of from inside the flying machine, but the explanation may be
found in the immense heat that must have been required to generate the light, since it illuminated the entire country for fifty miles or so, and we were able to read without trouble the fine print of the abbot's rubric. This Flying Ring moved on an even keel at the tremendous velocity of about two hundred miles an hour. We wondered what would happen if it turned turtle, for in that case the weight of the superstructure would have rendered it impossible for the machine to right itself. In fact, none of us had ever imagined any such air monster before. Beside it a Zeppelin seemed like a wooden toy.

The Ring passed over the mountains toward Cabes and within a short time a volcanic eruption occurred that destroyed a section of the Atlas Range. [Mr. Quinn here describes with considerable detail the destruction of the mountains.] The next morning I found Biskra crowded with Arabs, who reported that the ocean had poured through the passage made by the eruption and was flooding the entire desert as far south as the oasis of Wargla, and that it had come within twelve miles of the walls of our own city. I at once hired a donkey and made a personal investigation, with the result that I can report as a fact that the entire desert east and south of Biskra is inundated to a depth of from seven to ten feet and that the water gives no sign of going down. The loss of life seems to have been negligible, owing to the fact that the height of the water is not great and that many unexpected islands have provided safety for the caravans that were in transitu. These are now marooned and waiting for assistance, which I am informed will be sent from Cabes in the form of flat-bottomed boats fitted with motor auxiliaries.

Respectfully submitted,

D. W. QUINN, Jr., Acting U. S. Consul.

The Italian cruiser Fiala, which had been carried one hundred and eighty miles into the desert on the night of the eruption, grounded safely on the plateau of Tasili, but the volcanic tidal wave on which she had been swept along, having done its work, receded, leaving too little water for the Fiala's draft of thirty-seven feet. Four launches sent out in different directions to the south and east reported no sign of land, but immense quantities of floating vegetable matter, yellow dust, and the bodies of jackals, camels, zebras, and lions. The fifth launch after great hardships reached the seacoast through the new channel and arrived at Sfax after eight days.

The mean tide level of the Mediterranean sank fifteen inches, and the water showed marked discoloration for several months, while a volcanic haze hung over Northern Africa, Sicily, Malta, and Sardinia for an even longer period.

Though many persons must have lost their lives the records are incomplete in this respect; but there is a curious document in the mosque at Sfax touching the effect of the Lavender Ray. It appears that an Arab mussel-gatherer was in a small boat with his two brothers at the time the Ring appeared above the mountains. As they looked up toward the sky the Ray flashed over and illuminated their faces. They thought nothing of it at the time, for almost immediately the mountains were rent asunder and in the titanic upheaval that followed they were all cast upon the shore, as they thought, dead men. Reaching Sfax they reported their adventures and offered prayers in gratitude for their extraordinary escape; but five days later all three began to suffer excruciating torment from internal burns, the skin upon their heads and bodies began to peel off, and they died in agony within the week.

VIII

It was but a few days thereafter that the President of the United States received the official note from Count von Koenitz, on behalf of the Imperial German Commissioners, to the effect that Germany would join with the other Powers in an armistice looking toward peace and ultimately a universal disarmament. Similar notes had already been received by the President from France, Great Britain, Russia, Italy, Austria, Spain, and Slavia, and a multitude of the other smaller Powers who were engaged in the war, and there was no longer any reason for delaying the calling of an international council or diet for the purpose of bringing about what Pax demanded as a ransom for the safety of the globe.

In the files of the State Department at Washington there is secreted the only record of the diplomatic correspondence touching these momentous events, and a transcript of the messages exchanged between the President of the United States and the Arbiter of Human Destiny. They are comparatively few in number, for Pax seemed to be satisfied to leave all details to the Powers themselves. In the interest of saving time, however, he made the simple suggestion that the present ambassadors should be given plenary powers to determine the terms and conditions upon which universal peace should be declared. All these proceedings and the reasons therefore were kept profoundly secret. It began to look as though the matter would be put through with characteristic Yankee promptness. Pax's suggestion was acceded to, and the ambassadors and ministers were given unrestricted latitude in drawing the treaty that should abolish war forever.

Now that he had been won over no one was more indefatigable than Von Koenitz, none more fertile in suggestions. It was he who drafted with his own hand the forty pages devoted to the creation of the commission charged with the duty of destroying all arms, munitions, and implements of war; and he not only acted as chairman of the preliminary drafting committee, but was an active member of at least half a dozen other important
subcommittees. The President daily communicated the progress of this conference of the Powers to Pax through Bill Hood, and received daily in return a hearty if laconic approval.

"I am satisfied of the sincerity of the Powers and with the progress made. PAX."

was the ordinary type of message received. Meantime word had been sent to all the governments that an indefinite armistice had been declared, to commence at the end of ten days, for it had been found necessary to allow for the time required to transmit the orders to the various fields of military operations throughout Europe. In the interim the war continued.

It was at this time that Count von Koenitz, who now was looked upon as the leading figure of the conference, arose and said: "Your Excellencies, this distinguished diet will, I doubt not, presently conclude its labours and receive not only the approval of the Powers represented but the gratitude of the nations of the world. I voice the sentiments of the Imperial Commissioners when I say that no Power looks forward with greater eagerness than Germany to the accomplishment of our purpose. But we should not forget that there is one menace to mankind greater than that of war--namely, the lurking danger from the power of this unknown possessor of superhuman knowledge of explosives. So far his influence has been a benign one, but who can say when it may become malignant? Will our labours please him? Perhaps not. Shall we agree? I hope so, but who can tell? Will our armies lay down their arms even after we have agreed? I believe all will go well; but is it wise for us to refrain from jointly taking steps to ascertain the identity of this unknown juggler with Nature, and the source of his power? It is my own opinion, since we cannot exert any influence or control upon this individual, that we should take whatever steps are within our grasp to safeguard ourselves in the event that he refuses to keep faith with us. To this end I suggest an international conference of scientific men from all the nations to be held here in Washington coincidently with our own meetings, with a view to determining these questions."

His remarks were greeted with approval by almost all the representatives present except Sir John Smith, who mildly hinted that such a course might be regarded as savouring a trifle of double dealing. Should Pax receive knowledge of the suggested conference he might question their sincerity and view all their doings with suspicion. In a word, Sir John believed in following a consistent course and treating Pax as a friend and ally and not as a possible enemy.

Sir John's speech, however, left the delegates unconvinced and with the feeling that his argument was over-refined. They felt that there could be no objection to endeavouring to ascertain the source of Pax's power--the law of self-preservation seemed to indicate such a course as necessary. And it had, in fact, already been discussed vaguely by several less conspicuous delegates. Accordingly it was voted, with but two dissenting voices,[2] to summon what was known as Conference No. 2, to be held as soon as possible, its proceedings to be conducted in secret under the auspices of the National Academy of Sciences, with the president of the Academy acting as permanent chairman. To this conference the President appointed Thornton as one of the three delegates from the United States.

[Footnote 2: The President of the United States also voted in the negative.]

The council of the Powers having so voted, Count von Koenitz at once transmitted, by way of Sayville, a message which in code appeared to be addressed to a Herr Karl Heinweg, Notary, at 12^{BIS} Bunden Strasse, Strassburg, and related to a mortgage about to fall due upon some of Von Koenitz's properties in Thüringen. When decoded it read:

"To the Imperial Commissioners of the German Federated States:

"I have the honour to report that acting according to your distinguished instructions I have this day proposed an international conference to consider the scientific problems presented by certain recent phenomena and that my proposition was adopted. I believe that in this way the proceedings here may be delayed indefinitely and time thus secured to enable an expedition to be organized and dispatched for the purpose of destroying this unknown person or ascertaining the secret of his power, in accordance with my previous suggestion. It would be well to send as delegates to this Conference No. 2 several professors of physics who can by plausible arguments and ingenious theories so confuse the matter that no determination can be reached. I suggest Professors Gasgabelaus, of München, and Leybach, of the Hague.

"VON KOENITZ."

And having thus fulfilled his duty the count took a cab to the Metropolitan Club and there played a discreet game of billiards with Señor Tomasso Varilla, the ex-minister from Argentina.

Von Koenitz from the first had played his hand with a skill which from a diplomatic view left nothing to be desired. The extraordinary natural phenomena which had occurred coincidentally with the first message of Pax to the President of the United States and the fall of Cleopatra's Needle had been immediately observed by the scientists attached to the Imperial and other universities throughout the German Federated States, and had no sooner been observed than their significance had been realized. These most industrious and thorough of all human investigators had instantly reported the facts and their preliminary conclusions to the Imperial Commissioners, with the
recommendation that no stone be left unturned in attempting to locate and ascertain the causes of this disruption of
the forces of nature. The Commissioners at once demanded an exhaustive report from the faculty of the Imperial
German University, and notified Von Koenitz by cable that until further notice he must seek in every way to delay
investigation by other nations and to belittle the importance of what had occurred, for these astute German scientists
had at once jumped to the conclusion that the acceleration of the earth's motion had been due to some human agency
possessed of a hitherto unsuspected power.

It was for this reason that at the first meeting at the White House the Ambassador had pooh-poohed the whole
matter and talked of snowstorms in the Alps and showers of fish at Heidelberg, but with the rending of the northern
coast of Africa and the well-attested appearances of "The Ring" he soon reached the conclusion that his wisest
course was to cause such a delay on the part of the other Powers that the inevitable race for the secret would be won
by the nation which he so astutely represented. He reasoned, quite accurately, that the scientists of England, Russia,
and America would not remain idle in attempting to deduce the cause and place the origin of the phenomena and the
habitat of the master of the Ring, and that the only effectual means to enable Germany to capture this, the greatest of
all prizes of war, was to befuddle the representatives of the other nations while leaving his own unhindered in their
efforts to accomplish that which would make his countrymen, almost without further effort, the masters of the
world. Now the easiest way to befuddle the scientists of the world was to get them into one place and befuddle them
all together, and after communicating with his superiors, he had proceeded to do. He was a clever man, trained
in the devious ways of the Wilhelmstrasse, and when he set out to accomplish something he was almost inevitably
successful. Yet in spite of the supposed alliance between Kaiser and Deity man proposes and God disposes, and
sometimes the latter uses the humblest of human instruments in that disposition.

IX

The Imperial German Commissioner for War, General Hans von Helmuth, was a man of extraordinary decision
and farsightedness. Sixty years of age, he had been a member of the general staff since he was forty. He had sat at
the feet of Bismarck and Von Moltke, and during his active participation in the management of German military
affairs he had seen but slight changes in their policy: Mass--overwhelming mass; sudden momentous onslaught, and,
above all, an attack so quick that your adversary could not regain his feet. It worked nine times out of ten, and when
it didn't it was usually better than taking the defensive. General von Helmuth having an approved system was to that
extent relieved of anxiety, for all he had to do was to work out details. In this his highly efficient organization was
almost automatic. He himself was a human compendium of knowledge, and he had but to press a button and emit a
few gutturals and any information that he wanted lay typewritten before him. Now he sat in his office smoking a
Bremen cigar and studying a huge Mercatorial projection of the Atlantic and adjacent countries, while with the
fingers of his left hand he combed his heavy beard.

From the window he looked down upon the inner fortifications of Mainz--to which city the capital had been
removed three months before--and upon the landing stage for the scouting planes which were constantly arriving or
whirring off toward Holland or Strassburg. Across the river, under the concealed guns of a sunken battery, stood the
huge hangars of the now useless dirigibles $Z^{51~57}$. The landing stage communicated directly by telephone with the
adjutant's office, an enormous hall filled with maps, with which Von Helmuth's private room was connected. The
adjutant himself, a worried-looking man with a bullet head and an iron-gray moustache, stood at a table in the centre
of the hall addressing rapid-fire sentences to various persons who appeared in the doorway, saluted, and hurried off
again. Several groups were gathered about the table and the adjutant carried on an interrupted conversation with all
of them, pausing to read the telegrams and messages that shot out of the pneumatic tubes upon the table from the
telegraph and telephone office on the floor below.

An elderly man in rather shabby clothes entered, looking about helplessly through the thick lenses of his double
spectacles, and the adjutant turned at once from the officers about him with an "Excuse me, gentlemen."

"Good afternoon, Professor von Schwenitz; the general is waiting for you," said he. "This way, please."

He stalked across to the door of the inner office.

"Professor von Schwenitz is here," he announced, and immediately returned to take up the thread of his
conversation in the centre of the hall.

The general turned gruffly to greet his visitor. "I have sent for you, Professor," said he, without removing his
cigar, "in order that I may fully understand the method by which you say you have ascertained the place of origin of
the wireless messages and electrical disturbances referred to in our communications of last week. This may be a
serious matter. The accuracy of your information is of vital importance."

The professor hesitated in embarrassment, and the general scowled.

"Well?" he demanded, biting off the chewed end of his cigar. "Well? This is not a lecture room. Time is short.
Out with it."

"Your Excellency!" stammered the poor professor, "I--I----The observations are so--inadequate--one cannot
"What?" roared Von Helmuth. "But you said you had!"
"Only approximately, your Excellency. One cannot be positive, but within a reasonable distance---" He paused.
"What do you call a reasonable distance? I supposed your physics was an exact science!" retorted the general.
"But the data---"
"What do you call a reasonable distance?" bellowed the Imperial Commissioner.
"A hundred kilometres!" suddenly shouted the overwrought professor, losing control of himself. "I won't be talked to this way, do you hear? I won't! How can a man think? I'm a member of the faculty of the Imperial University. I've been decorated twice--twice!"
"Fiddlesticks!" returned the general, amused in spite of himself. "Don't be absurd. I merely wish you to hurry. Have a cigar?"
"Oh, your Excellency!" protested the professor, now both ashamed and frightened. "You must excuse me. The war has shattered my nerves. May I smoke? Thank you."
"Sit down. Take your time," said Von Helmuth, looking out and up at a monoplane descending toward the landing in slowly lessening spirals.
"You see, your Excellency," explained Von Schwenitz, "the data are fragmentary, but I used three methods, each checking the others."
"The first?" shot back the general. The monoplane had landed safely.
"I compared the records of all the seismographs that had registered the earthquake wave attendant on the electrical discharges accompanying the great yellow auroras of July. These shocks had been felt all over the globe, and I secured reports from Java, New Guinea, Lima, Tucson, Greenwich, Algeria, and Moscow. These showed the wave had originated somewhere in Eastern Labrador."
"Yes, yes. Go on!" ordered the general.
"In the second place, the violent magnetic storms produced by the helium aurora appear to have left their mark each time upon the earth in a permanent, if slight, deflection of the compass needle. The earth's normal magnetic field seems to have had superimposed upon it a new field comprised of lines of force nearly parallel to the equator. My computations show that these great circles of magnetism centre at approximately the same point in Labrador as that indicated by the seismographs--about fifty-five degrees north and seventy-five degrees west."
The general seemed struck with this.
"Permanent deflection, you say!" he ejaculated.
"Yes, apparently permanent. Finally the barometer records told the same story, although in less precise form. A compressional wave of air had been started in the far north and had spread out over the earth with the velocity of sound. Though the barographs themselves gave no indication whence this wave had come, the variation in its intensity at different meteorological observatories could be accounted for by the law of inverse squares on the supposition that the explosion which started the wave had occurred at fifty-five degrees north, seventy-five degrees west."
The professor paused and wiped his glasses. With a roar a Taube slid off the landing stage, shot over toward the hangars, and soared upward.
"Is that all?" inquired the general, turning again to the chart.
"That is all, your Excellency," answered Von Schwenitz.
"Then you may go!" muttered the Imperial Commissioner. "If we find the source of these disturbances where you predict you will receive the Black Eagle."
"Oh, your Excellency!" protested the professor, his face shining with satisfaction.
"And if we do not find it--there will be a vacancy on the faculty of the Imperial University!" he added grimly.
"Good afternoon."
He pressed a button and the departing scholar was met by an orderly and escorted from the War Bureau, while the adjutant joined Von Helmuth.
"He's got him! I'm satisfied!" remarked the Commissioner. "Now outline your plan."
The bullet-headed man took up the calipers and indicated a spot on the coast of Labrador:
"Our expedition will land, subject to your approval, at Hamilton Inlet, using the town of Rigolet as a base. By availing ourselves of the Nascopee River and the lakes through which it flows, we can easily penetrate to the highland where the inventor of the Ring machine has located himself. The auxiliary brigantine Sea Fox is lying now under American colours at Amsterdam, and as she can steam fifteen knots an hour she should reach the Inlet in about ten days, passing to the north of the Orkneys."
"What force have you in mind?" inquired Von Helmuth, his cold gray eyes narrowing.
"Three full companies of sappers and miners, ten mountain howitzers, a field battery, fifty rapid-fire standing rifles, and a complete outfit for throwing lyddite. Of course we shall rely principally on high explosives if it becomes necessary to use force, but what we want is a hostage who may later become an ally."

"Yes, of course," said the general with a laugh. "This is a scientific, not a military, expedition."

"I have asked Lieutenant Münster to report upon the necessary equipment."

Von Helmuth nodded, and the adjutant stepped to the door and called out: "Lieutenant Münster!"

A trim young man in naval uniform appeared upon the threshold and saluted.

"State what you regard as necessary as equipment for the proposed expedition," said the general.

"Twenty motor boats, each capable of towing several flat-bottomed barges or native canoes, forty mules, a field telegraph, and also a high-powered wireless apparatus, axes, spades, wire cables and drums, windlasses, dynamite for blasting, and provisions for sixty days. We shall live off the country and secure artisans and bearers from among the natives."

"When will it be possible to start?" inquired the general.

"In twelve days if you give the order now," answered the young man.

"Very well, you may go. And good luck to you!" he added.

The young lieutenant saluted and turned abruptly on his heel.

Over the parade ground a biplane was hovering, darting this way and that, rising and falling with startling velocity.

"Who's that?" inquired the general approvingly.

"Schöningen," answered the adjutant.

The Imperial Commissioner felt in his breast-pocket for another cigar.

"Do you know, Ludwig," he remarked amiably as he struck a meditative match, "sometimes I more than half believe this 'Flying Ring' business is all rot!"

The adjutant looked pained.

"And yet," continued Von Helmuth, "if Bismarck could see one of those things," he waved his cigar toward the gyrating aeroplane, "he wouldn't believe it."

X

All day the International Assembly of Scientists, officially known as Conference No. 2, had been sitting, but not progressing, in the large lecture hall of the Smithsonian Institution, which probably had never before seen so motley a gathering. Each nation had sent three representatives, two professional scientists, and a lay delegate, the latter some writer or thinker renowned in his own country for his wide knowledge and powers of ratiocination. They had come together upon the appointed day, although the delegates from the remoter countries had not yet arrived, and the Committee on Credentials had already reported. Germany had sent Gasgabelaus, Leybach, and Wilhelm Lamszus; France--Sortell, Amand, and Buona Varilla; Great Britain--Sir William Crookes, Sir Francis Soddy, and Mr. H. G. Wells, celebrated for his "The War of the Worlds" and The "World Set Free," and hence supposedly just the man to unravel a scientific mystery such as that which confronted this galaxy of immortals.

The Committee on Data, of which Thornton was a member, having been actively at work for nearly two weeks through wireless communication with all the observatories--seismic, meteorological, astronomical, and otherwise--throughout the world, had reduced its findings to print, and this matter, translated into French, German, and Italian, had already been distributed among those present. Included in its pages was Quinn's letter to the State Department.

The roll having been called, the president of the National Academy of Sciences made a short speech in which he outlined briefly the purpose for which the committee had been summoned and commented to some extent upon the character of the phenomena it was required to analyze.

And then began an unending series of discussions and explanations in French, German, Dutch, Russian, and Italian, by goggle-eyed, bushy-whiskered, long-haired men who looked like anarchists or sociologists and apparently had never before had an unrestricted opportunity to air their views on anything.

Thornton, listening to this hodgepodge of technicalities, was dismayed and distrustful. These men spoke a language evidently familiar to them, which he, although a professional scientist, found a meaningless jargon. The whole thing seemed unreal, had a purely theoretic or literary quality about it that made him question even their premises. In the tainted air of the council room, listening to these little pot-bellied Professoren from Amsterdam and Münich, doubt assailed him, doubt even that the earth had changed its orbit, doubt even of his own established formulæ and tables. Weren't they all just talking through their hats? Wasn't it merely a game in which an elaborate system of equivalents gave a semblance of actuality to what in fact was nothing but mind-play? Even Wells, whose literary style he admired as one of the beauties as well as one of the wonders of the world, had been a disappointment. He had seemed singularly halting and unconvincing.

"I wish I knew a practical man--I wish Bennie Hooker were here!" muttered Thornton to himself. He had not
seen his classmate Hooker for twenty-six years; but that was one thing about Hooker: you knew he'd be exactly the same—only more so—as he was when you last saw him. In those years Bennie had become the Lawson Professor of Applied Physics at Harvard. Thornton had read his papers on induced radiation, thermic equilibrium, and had one of Bennie's famous Gem Home Cookers in his own little bachelor apartment. Hooker would know. And if he didn't he'd tell you so, without befogging the atmosphere with a lot of things he did know, but that wouldn't help you in the least. Thornton clutched at the thought of him like a falling aeronaut at a dangling rope. He'd be worth a thousand of these dreaming lecturers, these beer-drinking visionaries! But where could he be found? It was August, vacation time. Still, he might be in Cambridge giving a summer course or something.

At that moment Professor Gasgabelaus, the temporary chairman, a huge man, the periphery of whose abdomen rivalled the circumference of the "working terrestrial globe" at the other end of the platform, pounded perspiringly with his gavel and announced that the conference would adjourn until the following Monday morning. It was Friday afternoon, so he had sixty hours in which to connect with Bennie, if Bennie could be discovered. A telegram of inquiry brought no response, and he took the midnight train to Boston, reaching Cambridge about two o'clock the following afternoon.

The air trembled with heat. Only by dodging from the shadow of one big elm to another did he manage to reach the Appian Way—the street given in the university catalogue as Bennie's habitat—alive. As he swung open the little wicket gate he realized with an odd feeling that it was the same house where Hooker had lived when a student, twenty-five years before.

"Board" was printed on a yellow, fly-blown card in the corner of the window beside the door.

Up there over the porch was the room Bennie had inhabited from '85 to '89. He recalled vividly the night he, Thornton, had put his foot through the lower pane. They had filled up the hole with an old golf stocking. His eyes searched curiously for the pane. There it was, still broken and still stuffed—it couldn't be!—with some colourless material strangely resembling disintegrating worsted. The sun smote him in the back of his neck and drove him to seek the relief of the porch. Had he ever left Cambridge? Wasn't it a dream about his becoming an astronomer and working at the Naval Observatory? And all this stuff about the earth going on the loose? If he opened the door wouldn't he find Bennie with a towel round his head cramming for the "exams"? For a moment he really imagined that he was an undergraduate. Then as he fanned himself with his straw hat he caught, on the silk band across the interior, the words: "Smith's Famous Headwear, Washington, D.C." No, he was really an astronomer.

He shuddered in spite of the heat as he pulled the bell knob. What ghosts would its jangle summon? The bell, however, gave no sound; in fact the knob came off in his hand, followed by a foot or so of copper wire. He laughed, gazing at it blankly. No one had ever used the bell in the old days. They had simply kicked open the door and halloed: "O-o-h, Bennie Hooker!"

Thornton laid the knob on the piazza and inspected the front of the house. The windows were thick with dust, the "yard" scrappily with weeds. A piece of string held the latch of the gate together. Then automatically, and without intending to do so at all, Thornton turned the handle of the front door, assisting it coincidentally with a gentle kick from his right toe, and found himself in the narrow cabbage-scented hallway. The old, familiar, battered black-walnut hatrack of his student days leaned drunkenly against the wall—Thornton knew one of its back legs was missing—and on the imitation marble slab was a telegram addressed to "Professor Benjamin Hooker." And also, instinctively, Thornton lifted up his adult voice and yelled:

"O-o-h, ye-ay! Bennie Hooker!"

The volume of his own sound startled him. Instantly he saw the ridiculousness of it—he, the senior astronomer at the Naval Observatory, yelling like that—-

"O-o-h, ye-ay!" came in smothered tones from above.

Thornton bounded up the stairs, two, three steps at a time, and pounded on the old door over the porch.

"Go away!" came back the voice of Bennie Hooker. "Don't want any lunch!"

Thornton continued to bang on the door while Professor Hooker wrathfully besought the intruder to depart before he took active measures. There was the cracking of glass.

"Oh, damn!" came from inside.

Thornton rattled the knob and kicked. Somebody haltingly crossed the room, the key turned, and Prof. Bennie Hooker opened the door.

"Well?" he demanded, scowling over his thick spectacles.

"Hello, Bennie!" said Thornton, holding out his hand.

"Hello, Buck!" returned Hooker. "Come in. I thought it was that confounded Ethiopian."

As far as Thornton could see, it was the same old room, only now crammed with books and pamphlets and crowded with tables of instruments. Hooker, clad in sneakers, white ducks, and an undershirt, was smoking a small "T. D." pipe.
"Where on earth did you come from?" he inquired good-naturedly.

"Washington," answered Thornton, and something told him that this was the real thing--the "goods"--that his journey would be repaid.

Hooker waved the "T. D." in a general sort of way toward some broken-down horsehair armchairs and an empty crate.

"Sit down, won't you?" he said, as if he had seen his guest only the day before. He looked vaguely about for something that Thornton might smoke, then seated himself on a cluttered bench holding a number of retorts, beside which flamed an oxyacetylene blowpipe. He was a wizened little chap, with scrawny neck and protruding Adam's apple. His long hair gave no evidence of the use of the comb, and his hands were the hands of Esau. He had an alertness that suggested a robin, but at the same time gave the impression that he looked through things rather than at them. On the mantel was a saucer containing the fast oxidizing cores of several apples and a half-eaten box of oatmeal biscuits.

"My Lord! This is an untidy hole! No more order than when you were an undergrad!" exclaimed Thornton, looking about him in amused horror.

"Order?" returned Bennie indignantly. "Everything's in perfect order! This chair is filled with the letters I have already answered; this chair with the letters I've not answered; and this chair with the letters I shall never answer!"

Thornton took a seat on the crate, laughing. It was the same old Bennie!

"You're an incorrigible!" he sighed despairingly.

"Well, you're a star gazer, aren't you?" inquired Hooker, relighting his pipe. "Some one told me so--I forget who. You must have a lot of interesting problems. They tell me that new planet of yours is full of uranium."

Thornton laughed. "You mustn't believe all that you read in the papers. What are you working at particularly?"

"Oh, radium and thermic induction mostly," answered Hooker. "And when I want a rest I take a crack at the fourth dimension--spacial curvature's my hobby. But I'm always working at radio stuff. That's where the big things are going to be pulled off, you know."

"Yes, of course," answered Thornton. He wondered if Hooker ever saw a paper, how long since he had been out of the house. "By the way, did you know Berlin had been taken?" he asked.

"Berlin--in Germany, you mean?"

"Yes, by the Russians."

"No! Has it?" inquired Hooker with politeness. "Oh, I think some one did mention it."

Thornton fumbled for a cigarette and Bennie handed him a match. They seemed to have extraordinarily little to say for men who hadn't seen each other for twenty-six years.

"I suppose," went on the astronomer, "you think it's deuced funny my dropping in casually this way after all this time, but the fact is I came on purpose. I want to get some information from you straight."

"Go ahead!" said Bennie. "What's it about?"

"Well, in a word," answered Thornton, "the earth's nearly a quarter of an hour behind time."

Hooker received this announcement with a polite interest but no astonishment.

"That's a how-de-do!" he remarked. "What's done it?"

"That's what I want you to tell me," said Thornton sternly. "What could do it?"

Hooker unlaced his legs and strolled over to the mantel.

"Have a cracker?" he asked, helping himself. Then he picked up a piece of wood and began whittling. "I suppose there's the devil to pay?" he suggested. "Things upset and so on? Atmospheric changes? When did it happen?"
"About three weeks ago. Then there's this Sahara business."

"What Sahara business?"

"Haven't you heard?"

"No," answered Hooker rather impatiently. "I haven't heard anything. I haven't any time to read the papers; I'm too busy. My thermic inductor transformers melted last week and I'm all in the air. What was it?"

"Oh, never mind now," said Thornton hurriedly, perceiving that Hooker's ignorance was an added asset. He'd get his science pure, uncontaminated by disturbing questions of fact. "How about the earth's losing that quarter of an hour?"

"Of course she's off her orbit," remarked Hooker in a detached way. "And you want to know what's done it? Don't blame you. I suppose you've gone into the possibilities of stellar attraction."

"Discount that!" ordered Thornton. "What I want to know is whether it could happen from the inside?"

"Why not?" inquired Hooker. "A general shift in the mass would do it. So would the mere application of force at the proper point."

"It never happened before."

"Of course not. Neither had seedless oranges until Burbank came along," said Hooker.

"Do you regard it as possible by any human agency?" inquired Thornton.

"Why not?" repeated Hooker. "All you need is the energy. And it's lying all round if you could only get at it. That's just what I'm working at now. Radium, uranium, thorium, actinium--all the radioactive elements--are, as everybody knows, continually disintegrating, discharging the enormous energy that is imprisoned in their molecules. It may take generations, epochs, centuries, for them to get rid of it and transform themselves into other substances, but they will inevitably do so eventually. They're doing with more or less of a rush what all the elements are doing at their leisure. A single ounce of uranium contains about the same amount of energy that could be produced by the combustion of ten tons of coal--but it won't let the energy go. Instead it holds on to it, and the energy leaks slowly, almost imperceptibly, away, like water from a big reservoir tapped only by a tiny pipe. 'Atomic energy' Rutherford calls it. Every element, every substance, has its ready to be touched off and put to use. The chap who can find out how to release that energy all at once will revolutionize the civilized world. It will be like the discovery that water could be turned into steam and made to work for us--multiplied a million times. If, instead of that energy just oozing away and the uranium disintegrating infinitesimally each year, it could be exploded at a given moment you could drive an ocean liner with a handful of it. You could make the old globe stagger round and turn upside down! Mankind could just lay off and take a holiday. But how?"

Bennie enthusiastically waved his pipe at Thornton.

"How! That's the question. Everybody's known about the possibilities, for Soddy wrote a book about it; but nobody's ever suggested where the key could be found to unlock that treasure-house of energy. Some chap made up a novel once and pretended it was done, but he didn't say how. But"--and he lowered his voice passionately--"I'm working at it, and--and--I've nearly--nearly got it."

Thornton, infected by his friend's excitement, leaned forward in his chair.

"Yes--nearly. If only my transformers hadn't melted! You see I got the idea from Savaroff, who noticed that the activity of radium and other elements wasn't constant, but varied with the degree of solar activity, reaching its maximum at the periods when the sun spots were most numerous. In other words, he's shown that the breakdown of the atoms of radium and the other radioactive elements isn't spontaneous, as Soddy and others had thought, but is due to the action of certain extremely penetrating rays given out by the sun. These particular rays are the result of the enormous temperature of the solar atmosphere, and their effect upon radioactive substances is analogous to that of the detonating cap upon dynamite. No one has been able to produce these rays in the laboratory, although Hempel has suspected sometimes that traces of them appeared in the radiations from powerful electric sparks. Everything came to a halt until Hiroshito discovered thermic induction, and we were able to elevate temperature almost indefinitely through a process similar to the induction of high electric potentials by means of transformers and the Ruhmkorff coil.

"Hiroshito wasn't looking for a detonating ray and didn't have time to bother with it, but I started a series of experiments with that end in view. I got close--I am close, but the trouble has been to control the forces set in motion, for the rapid rise in temperature has always destroyed the apparatus."

Thornton whistled. "And when you succeed?" he asked in a whisper.

Hooker's face was transfigured.

"When I succeed I shall control the world," he cried, and his voice trembled. "But the damn thing either melts or explodes," he added with a tinge of indignation.

"You know about Hiroshito's experiments, of course; he used a quartz bulb containing a mixture of neon gas and the vapour of mercury, placed at the centre of a coil of silver wire carrying a big oscillatory current. This
induced a ring discharge in the bulb, and the temperature of the vapour mixture rose until the bulb melted. He calculated that the temperature of that part of the vapour which carried the current was over 6,000°. You see, the ring discharge is not in contact with the wall of the bulb, and can consequently be much hotter. It's like this." Here Bennie drew with a burnt match on the back of an envelope a diagram of something which resembled a doughnut in a chianti flask.

Thornton scratched his head. "Yes," he said, "but that's an old principle, isn't it? Why does Hiro--what's his name--call it--thermic induction?"

"Oriental imagination, probably," replied Bennie. "Hiroshito observed that a sudden increase in the temperature of the discharge occurred at the moment when the silver coil of his transformer became white hot, which he explained by some mysterious inductive action of the heat vibrations. I don't follow him at all. His theory's probably all wrong, but he delivered the goods. He gave me the right tip, even if I have got him lashed to the mast now. I use a tungsten spiral in a nitrogen atmosphere in my transformer and replace the quartz bulb with a capsule of zircorundum."

"A capsule of what?" asked Thornton, whose chemistry was mid-Victorian.

"Zircorundum," said Bennie, grooping around in a drawer of his work table. "It's an absolute nonconductor of heat. Look here, just stick your finger in that." He held out to Thornton what appeared to be a small test tube of black glass. Thornton, with a slight moral hesitation, did as he was told, and Bennie, whistling, picked up the oxyacetylene blowpipe, regarding it somewhat as a dog fancier might gaze at an exceptionally fine pup. "Hold up your finger," said he to the astronomer. "That's right--like that!"

Thrusting the blowpipe forward, he allowed the hissing blue-white flame to wrap itself round the outer wall of the tube--a flame which Thornton knew could melt its way through a block of steel--but the astronomer felt no sensation of heat, although he not unnaturally expected the member to be incinerated.

"Queer, eh?" said Bennie. "Absolute insulation! Beats the thermos bottle, and requires no vacuum. It isn't quite what I want though, because the disintegrating rays which the ring discharge gives out break down the zirconium, which isn't an end-product of radioactivity. The pressure in the capsule rises, due to the liberation of helium, and it blows up, and the landlady or the police come up and bother me."

Thornton was scrutinizing Bennie's rough diagram. "This ring discharge," he meditated; "I wonder if it isn't something like a sunspot. You know the spots are electron vortices with strong magnetic fields. I'll bet you the Savaroff disintegrating rays come from the spots and not from the whole surface of the sun!"

"My word," said Bennie, with a grin of delight, "you occasionally have an illuminating idea, even if you are a musty astronomer. I always thought you were a sort of calculating machine, who slept on a logarithm table. I owe you two drinks for that suggestion, and to scare a thirst into you I'll show you an experiment that no living human being has ever seen before. I can't make very powerful disintegrating rays yet, but I can break down uranium, which is the easiest of all. Later on I'll be able to disintegrate anything, if I have luck--that is, anything except end-products. Then you'll see things fly. But, for the present, just this." He picked up a thin plate of white metal. "This is the metal we're going to attack, uranium--the parent of radium--and the whole radioactive series, ending with the end-product lead."

He hung the plate by two fine wires fastened to its corners, and adjusted a coil of wire opposite its centre, while within the coil he slipped a small black capsule.

"This is the best we can do now," he said. "The capsule is made of zircorundum, and we shall get only a trace of the disintegrating rays before it blows up. But you'll see 'em, or, rather, you'll see the lavender phosphorescence of the air through which they pass."

He arranged a thick slab of plate glass between Thornton and the thermic transformer, and stepping to the wall closed a switch. An oscillatory spark discharge started off with a roar in a closed box, and the coil of wire became white hot.

"Watch the plate!" shouted Bennie.

And Thornton watched.

For ten or fifteen seconds nothing happened, and then a faint beam of pale lavender light shot out from the capsule, and the metal plate swung away from the incandescent coil as if blown by a gentle breeze.

Almost instantly there was a loud report and a blinding flash of yellow light so brilliant that for the next instant or two to Thornton's eyes the room seemed dark. Slowly the afternoon light regained its normal quality. Bennie relit his pipe unconcernedly.

"That's the germ of the idea," he said between puffs. "That capsule contains a mixture of vapours that give out disintegrating rays when the temperature is raised by thermic induction above six thousand. Most of 'em are stopped by the zirconium atoms in the capsule, which break down and liberate helium; and the temperature rises in the capsule until it explodes, as you saw just now, with a flash of yellow helium light. The rays that get out strike the
uranium plate and cause the surface layer of molecules to disintegrate, their products being driven off by the atomic explosions with a velocity about equal to that of light, and it's the recoil that deflects and swings the plate. The amount of uranium decomposed in this experiment couldn't be detected by the most delicate balance--small mass, but enormous velocity. See?"

"Yes, I understand," answered Thornton. "It's the old, 'momentum equals mass times velocity,' business we had in mechanics."

"Of course this is only a toy experiment," Bennie continued. "It is what the dancing pithballs of Franklin's time were to the multipolar, high-frequency dynamo. But if we could control this force and handle it on a large scale we could do anything with it--destroy the world, drive a car against gravity off into space, shift the axis of the earth perhaps!"

It came to Thornton as he sat there, cigarette in hand, that poor Bennie Hooker was going to receive the disappointment of his life. Within the next five minutes his dreams would be dashed to earth, for he would learn that another had stepped down to the pool of discovery before him. For how many years, he wondered, had Bennie toiled to produce his mysterious ray that should break down the atom and release the store of energy that the genii of Nature had concealed there. And now Thornton must tell him that all his efforts had gone for nothing!

"And you believe that any one who could generate a ray such as you describe could control the motion of the earth?" he asked.

"Of course, certainly," answered Hooker. "He could either disintegrate such huge quantities of matter that the mass of the earth would be shifted and its polar axis be changed, or if radioactive substances--pitchblende, for example--lay exposed upon the earth's surface he could cause them to discharge their helium and other products at such an enormous velocity that the recoil or reaction would accelerate or retard the motion of the globe. It would be quite feasible, quite simple--all one would need would be the disintegrating ray."

And then Thornton told Hooker of the flight of the giant Ring machine from the north and the destruction of the Mountains of Atlas through the apparent instrumentality of a ray of lavender light. Hooker's face turned slightly pale and his unshaven mouth tightened. Then a smile of exaltation illuminated his features.

"He's done it!" he cried joyously. "He's done it on an engineering scale. We pure-science dreamers turn up our noses at the engineers, but I tell you the improvements in the apparatus part of the game come when there is a big commercial demand for a thing and the engineering chaps take hold of it. But who is he and where is he? I must get to him. I don't suppose I can teach him much, but I've got a magnificent experiment that we can try together."

He turned to a littered writing-table and poked among the papers that lay there.

"You see," he explained excitedly, "if there is anything in the quantum theory----Oh! but you don't care about that. The point is where is the chap?"

And so Thornton had to begin at the beginning and tell Hooker all about the mysterious messages and the phenomena that accompanied them. He enlarged upon Pax's benignant intentions and the great problems presented by the proposed interference of the United States Government in Continental affairs, but Bennie swept them aside. The great thing, to his mind, was to find and get into communication with Pax.

"Ah! How he must feel! The greatest achievement of all time!" cried Hooker radiantly. "How ecstatically happy! Earth blossoming like the rose! Well-watered valleys where deserts were before. War abolished, poverty, disease! Who can it be? Curie? No; she's bottled in Paris. Posky, Langham, Varanelli--it can't be any one of those fellows. It beats me! Some Hindoo or Jap maybe, but never Hiroshito! Now we must get to him right away. So much to talk over."

He walked round the room, blundering into things, dizzy with the thought that his great dream had come true. Suddenly he swept everything off the table on to the floor and kicked his heels in the air.

"Hooray!" he shouted, dancing round the room like a freshman. "Hooray! Now I can take a holiday. And come to think of it, I'm as hungry as a brontosaurus!"

That night Thornton returned to Washington and was at the White House by nine o'clock the following day.

"It's all straight," he told the President. "The honestest man in the United States has said so."

XI

The moon rose over sleeping Paris, silverying the silent reaches of the Seine, flooding the deserted streets with mellow light, yet gently retouching all the disfigurements of the siege. No lights illuminated the cafés, no taxis dashed along the boulevards, no crowds loitered in the Place de l'Opéra or the Place Vendôme. Yet save for these facts it might have been the Paris of old time, unvisited by hunger, misery, or death. The curfew had sounded. Every citizen had long since gone within, extinguished his lights, and locked his door. Safe in the knowledge that the Germans' second advance had been finally met and effectually blocked sixty miles outside the walls, and that an armistice had been declared to go into effect at midnight, Paris slumbered peacefully.

Beyond the pellet-strewn fields and glacis of the second line of defence the invader, after a series of terrific onslaughts, had paused, retreated a few miles and intrenched himself, there to wait until the starving city should
capitulate. For four months he had waited, yet Paris gave no sign of surrendering. On the contrary, it seemed to have some mysterious means of self-support, and the war office, in daily communication with London, reported that it could withstand the investment for an indefinite period. Meantime the Germans reinterred themselves, built forts of their own upon which they mounted the siege guns intended for the walls, and constructed an impregnable line of entanglements, redoubts, and defences, which rendered it impossible for any army outside the city to come to its relief.

So rose the moon, turning white the millions of slate roofs, gilding the traceries of the towers of Notre Dame, dimming the searchlights which, like the antennae of gigantic fireflies, constantly played round the city from the summit of the Eiffel Tower. So slept Paris, confident that no crash of descending bombs would shatter the blue vault of the starlit sky or rend the habitations in which lay two millions of human beings, assured that the sun would rise through the gray mists of the Seine upon the ancient beauties of the Tuileries and the Louvre unmarred by the enemy's projectiles, and that its citizens could pass freely along its boulevards without menace of death from flying missiles. For no shell could be hurled a distance of sixty miles, and an armistice had been declared.

* * * *

Behind a small hill within the German fortifications a group of officers stood in the moonlight, examining what looked superficially like the hangar of a small dirigible. Nestling behind the hill it cast a black, rectangular shadow upon the trampled sand of the redoubt. A score of artisans were busy filling a deep trench through which a huge pipe led off somewhere—a sort of deadly plumbing, for the house sheltered a monster cannon reinforced by jackets of lead and steel, the whole encased in a cooling apparatus of intricate manufacture. From the open end of the house the cylindrical barrel of the gigantic engine of war raised itself into the air at an angle of forty degrees, and from the muzzle to the ground below it was a drop of over eighty feet. On a track running off to the north rested the projectiles side by side, resembling in the dim light a row of steam boilers in the yard of a locomotive factory. "Well," remarked one of the officers, turning to the only one of his companions not in uniform. "'Thanatos' is ready."

The man addressed was Von Heckmann, the most famous inventor of military ordnance in the world, already four times decorated for his services to the Emperor. "The labour of nine years!" he answered with emotion. "Nine long years of self-denial and unremitting study! But to-night I shall be repaid, repaid a thousand times."

The officers shook hands with him one after the other, and the group broke up; the men who were filling the trench completed their labours and departed; and Von Heckmann and the major-general of artillery alone remained, except for the sentries beside the gun. The night was balmy and the moon rode in a cloudless sky high above the hill. They crossed the enclosure, followed by the two sentinels, and entering a passage reached the outer wall of the redoubt, which was in turn closed and locked. Here the sentries remained, but Von Heckmann and the general continued on behind the fortifications for some distance.

"Well, shall we start the ball?" asked the general, laying his hand on Von Heckmann's shoulder. But the inventor found it so hard to master his emotion that he could only nod his head. Yet the ball to which the general alluded was the discharging of a fiendish war machine toward an unsuspecting and harmless city alive with sleeping people, and the emotion of the inventor was due to the fact that he had devised and completed the most atrocious engine of death ever conceived by the mind of man—the Relay Gun. Horrible as is the thought, this otherwise normal man had devoted nine whole years to the problem of how to destroy human life at a distance of a hundred kilometres, and at last he had been successful, and an emperor had placed with his own divinely appointed hands a ribbon over the spot beneath which his heart should have been.

The projectile of this diabolical invention was ninety-five centimetres in diameter, and was itself a rifled mortar, which in full flight, twenty miles from the gun and at the top of its trajectory, exploded in mid-air, hurling forward its contained projectile with an additional velocity of three thousand feet per second. This process repeated itself, the final or core bomb, weighing over three hundred pounds and filled with lyddite, reaching its mark one minute and thirty-five seconds after the firing of the gun. This crowning example of the human mind's destructive ingenuity had cost the German Government five million marks and had required three years for its construction, and by no means the least of its devilish capacities was that of automatically reloading and firing itself at the interval of every ten seconds, its muzzle rising, falling, or veering slightly from side to side with each discharge, thus causing the shells to fall at wide distances. The poisonous nature of the immense volumes of gas poured out by the mastodon when in action necessitated the withdrawal of its crew to a safe distance. But once set in motion it needed no attendant. It had been tested by a preliminary shot the day before, which had been directed to a point several miles outside the walls of Paris, the effect of which had been observed and reported by high-flying German aeroplanes equipped with wireless. Everything was ready for the holocaust.

Von Heckmann and the general of artillery continued to make their way through the intrenchments and other
fortifications, until at a distance of about a quarter of a mile from the redoubt where they had left the Relay Gun they arrived at a small whitewashed cottage.

"I have invited a few of my staff to join us," said the general to the inventor, "in order that they may in years to come describe to their children and their grandchildren this, the most momentous occasion in the history of warfare."

They turned the corner of the cottage and came upon a group of officers standing by the wooden gate of the cottage, all of whom saluted at their approach.

"Good evening, gentlemen," said the general. "I beg to present the members of my staff," turning to Von Heckmann.

The officers stood back while the general led the way into the cottage, the lower floor of which consisted of but a single room, used by the recent tenants as a kitchen, dining-room, and living-room. At one end of a long table, constructed by the regimental carpenter, supper had been laid, and a tub filled with ice contained a dozen or more quarts of champagne. Two orderlies stood behind the table, at the other end of which was affixed a small brass switch connected with the redoubt and controlled by a spring and button. The windows of the cottage were open, and through them poured the light of the full moon, dimming the flickering light of the candles upon the table.

In spite of the champagne, the supper, and the boxes of cigars and cigarettes, an atmosphere of solemnity was distinctly perceptible. It was as if each one of these officers, hardened to human suffering by a lifetime of discipline and active service, to say nothing of the years of horror through which they had just passed, could not but feel that in the last analysis the hurling upon an unsuspecting city of a rain of projectiles containing the highest explosive known to warfare, at a distance three times greater than that heretofore supposed to be possible to science, and the ensuing annihilation of its inhabitants, was something less for congratulation and applause than for sorrow and regret. The officers, who had joked each other outside the gate, became singularly quiet as they entered the cottage and gathered round the table where Von Heckmann and the general had taken their stand by the instrument. Utter silence fell upon the group. The mercury of their spirits dropped from summer heat to below freezing. What was this thing which they were about to do?

Through the windows, at a distance of four hundred yards, the pounding of the machinery which flooded the water jacket of the Relay Gun was distinctly audible in the stillness of the night. The pressure of a finger--a little finger-- upon that electric button was all that was necessary to start the torrent of iron and high explosives toward Paris. By the time the first shell would reach its mark nine more would be on their way, stretched across the midnight sky at intervals of less than eight miles. And once started the stream would continue uninterrupted for two hours. The fascinated eyes of all the officers fastened themselves upon the key. None spoke.

"Well, well, gentlemen!" exclaimed the general brusquely, "what is the matter with you? You act as if you were at a funeral! Hans," turning to the orderly, "open the champagne there. Fill the glasses. Bumpers all, gentlemen, for the greatest inventor of all times, Herr von Heckmann, the inventor of the Relay Gun!"

The orderly sprang forward and hastily commenced uncorking bottles, while Von Heckmann turned away to the window.

"Here, this won't do, Schelling! You must liven things up a bit!" continued the general to one of the officers. "This is a great occasion for all of us! Give me that bottle." He seized a magnum of champagne from the orderly and commenced pouring out the foaming liquid into the glasses beside the plates. Schelling made a feeble attempt at a joke at which the officers laughed loudly, for the general was a martinet and had to be humoured.

"Now, then," called out the general as he glanced toward the window, "Herr von Heckmann, we are going to drink your health! Officers of the First Artillery, I give you a toast--a toast which you will all remember to your dying day! Bumpers, gentlemen! No heel taps! I give you the health of 'Thanatos'--the leviathan of artillery, the winged bearer of death and destruction--and of its inventor, Herr von Heckmann. Bumpers, gentlemen!" The general slapped Von Heckmann upon the shoulder and drained his glass.

"'Thanatos'! Von Heckmann!" shouted the officers. And with one accord they dashed their goblets to the stone flagging upon which they stood.

"And now, my dear inventor," said the general, "to you belongs the honour of arousing 'Thanatos' into activity. Are you ready, gentlemen? I warn you that when 'Thanatos' snores the rafters will ring."

Von Heckmann had stood with bowed head while the officers had drunk his health, and he now hesitatingly turned toward the little brass switch with its button of black rubber that glistened so innocently in the candlelight. His right hand trembled. He dashed the back of his left across his eyes. The general took out a large silver watch from his pocket. "Fifty-nine minutes past eleven," he announced. "At one minute past twelve Paris will be disembowelled. Put your finger on the button, my friend. Let us start the ball rolling."

Von Heckmann cast a glance almost of disquietude upon the faces of the officers who were leaning over the table in the intensity of their excitement. His elation, his exaltation, had passed from him. He seemed overwhelmed at the momentousness of the act which he was about to perform. Slowly his index finger crept toward the button and
hovered half suspended over it. He pressed his lips together and was about to exert the pressure required to transmit
the current of electricity to the discharging apparatus when unexpectedly there echoed through the night the sharp
click of a horse's hoofs coming at a gallop down the village street. The group turned expectantly to the doorway.

An officer dressed in the uniform of an aide-de-camp of artillery entered abruptly, saluted, and produced from
the inside pocket of his jacket a sealed envelope which he handed to the general. The interest of the officers
suddenly centred upon the contents of the envelope. The general grumbled an oath at the interruption, tore open the
missive, and held the single sheet which it contained to the candlelight.

"An armistice!" he cried disgustedly. His eye glanced rapidly over the page.

"To the Major-General commanding the First Division of Artillery, Army of the Meuse:

"An armistice has been declared, to commence at midnight, pending negotiations for peace. You will see that
no acts of hostility occur until you receive notice that war is to be resumed.

"VON HELMUTH, "Imperial Commissioner for War."

The officers broke into exclamations of impatience as the general crumpled the missive in his hand and cast it
upon the floor.

"Donnerwetter!" he shouted. "Why were we so slow? Curse the armistice!" He glanced at his watch. It already
pointed to after midnight. His face turned red and the veins in his forehead swelled.

"To hell with peace!" he bellowed, turning back his watch until the minute hand pointed to five minutes to
twelve. "To hell with peace, I say! Press the button, Von Heckmann!"

But in spite of the agony of disappointment which he now acutely experienced, Von Heckmann did not fire.
Sixty years of German respect for orders held him in a viselike grip and paralyzed his arm.

"I can't," he muttered. "I can't."

The general seemed to have gone mad. Thrusting Von Heckmann out of the way, he threw himself into a chair
at the end of the table and with a snarl pressed the black handle of the key.

The officers gasped. Hardened as they were to the necessities of war, no act of insubordination like the present
had ever occurred within their experience. Yet they must all uphold the general; they must all swear that the gun was
fired before midnight. The key clicked and a blue bead snapped at the switch. They held their breaths, looking
through the window to the west.

At first the night remained still. Only the chirp of the crickets and the fretting of the aide-de-camp's horse
outside the cottage could be heard. Then, like the grating of a coffee mill in a distant kitchen when one is just
waking out of a sound sleep, they heard the faint, smothered whir of machinery, a sharper metallic ring of steel
against steel followed by a gigantic detonation which shook the ground upon which the cottage stood and overthrew
every glass upon the table. With a roar like the fall of a skyscraper the first shell hurled itself into the night. Half
terrified the officers gripped their chairs, waiting for the second discharge. The reverberation was still echoing
among the hills when the second detonation occurred, shortly followed by the third and fourth. Then, in intervals
between the crashing explosions, a distant rumbling growl, followed by a shuddering of the air, as if the night were
frightened, came up out of the west toward Paris, showing that the projectiles were at the top of their flight and
going into action. A lake of yellow smoke formed in the pocket behind the hill where lay the redoubt in which
"Thanatos" was snoring.

On the great race track of Longchamps, in the Bois de Boulogne, the vast herd of cows, sheep, horses, and
goats, collected together by the city government of Paris and attended by fifty or sixty shepherds especially imported
from les Landes, had long since ceased to browse and had settled themselves down into the profound slumber of the
animal world, broken only by an occasional bleating or the restless whinnying of a stallion. On the race course
proper, in front of the grandstand and between it and the judge's box, four of these shepherds had built a small fire
and by its light were throwing dice for coppers. They were having an easy time of it, these shepherds, for their
flocks did not wander, and all that they had to do was to see that the animals were properly driven to such parts of
the Bois as would afford proper nourishment.

"Well, mes enfants," exclaimed old Adrian Bannalec, pulling a turnip-shaped watch from beneath his blouse
and holding it up to the firelight, "it's twelve o'clock and time to turn in. But what do you say to a cup of chocolate
first?"

The others greeted the suggestion with approval, and going somewhere underneath the grandstand, Bannalec
produced a pot filled with water, which he suspended with much dexterity over the fire upon the end of a pointed
stick. The water began to boil almost immediately, and they were on the point of breaking their chocolate into it
when, from what appeared to be an immense distance, through the air there came a curious rumble.

"What was that?" muttered Bannalec. The sound was followed within a few seconds by another, and after a
similar interval by a third and fourth.

"There was going to be an armistice," suggested one of the younger herdsmen. He had hardly spoken before a
much louder and apparently nearer detonation occurred.

"That must be one of our guns," said old Adrian proudly. "Do you hear how much louder it speaks than those of the Germans?"

Other discharges now followed in rapid succession, some fainter, some much louder. And then somewhere in the sky they saw a flash of flame, followed by a thunderous concussion which rattled the grandstand, and a great fiery serpent came soaring through the heavens toward Paris. Each moment it grew larger, until it seemed to be dropping straight toward them out of the sky, leaving a trail of sparks behind it.

"It's coming our way," chattered Adrian.

"God have mercy upon us!" murmured the others.

Rigid with fear, they stood staring with open mouths at the shell that seemed to have selected them for the object of its flight.

"God have mercy on our souls!" repeated Adrian after the others.

Then there came a light like that of a million suns....

Alas for the wives and children of the herdsmen! And alas for the herds! But better that the eight core bombs projected by "Thanatos" through the midnight sky toward Paris should have torn the foliage of the Bois, destroyed the grandstands of Auteuil and Longchamps, with sixteen hundred innocent sheep and cattle, than that they should have sought their victims among the crowded streets of the inner city. Lucky for Paris that the Relay Gun had been sighted so as to sweep the metropolis from the west to the east, and that though each shell approached nearer to the walls than its preceding brother, none reached the ramparts. For with the discharge of the eighth shell and the explosion of the first core bomb filled with lyddite among the sleeping animals huddled on the turf in front of the grandstands, something happened which the poor shepherds did not see.

The watchers in the Eiffel Tower, seeing the heavens with their searchlights for German planes and German dirigibles, saw the first core bomb bore through the sky from the direction of Verdun, followed by its seven comrades, and saw each bomb explode in the Bois below. But as the first shell shattered the stillness of the night and spread its sulphureous and death-dealing fumes among the helpless cattle, the watchers on the Tower saw a vast light burst skyward in the far-distant east.

* * * * *

Two miles up the road from the village of Champaubert, Karl Biedenkopf, a native of Hesse-Nassau and a private of artillery, was doing picket duty. The moonlight turned the broad highroad toward Épernay into a gleaming white boulevard down which he could see, it seemed to him, for miles. The air was soft and balmy, and filled with the odour of hay which the troopers had harvested "on behalf of the Kaiser." Across the road "Gretchen," Karl's mare, grazed ruminatively, while the picket himself sat on the stone wall by the roadside, smoking the Bremen cigar which his corporal had given him after dinner.

The night was thick with stars. They were all so bright that at first he did not notice the comet which sailed slowly toward him from the northwest, seemingly following the line of the German intrenchments from Amiens, St.-Quentin, and Laon toward Rheims and Épernay. But the comet was there, dropping a long yellow beam of light upon the sleeping hosts that were beleaguering the outer ring of the French fortifications. Suddenly the repose of Biedenkopf's retrospections was abruptly disconcerted by the distant pounding of hoofs far down the road from Verdun. He sprang off the wall, took up his rifle, crossed the road, hastily adjusted "Gretchen's" bridle, leaped into the saddle, and awaited the night rider, whoever he might be. At a distance of three hundred feet he cried: "Halt!" The rider drew rein, hastily gave the countersign, and Biedenkopf, recognizing the aide-de-camp, saluted and drew aside.

"There goes a lucky fellow," he said aloud. "Nothing to do but ride up and down the roads, stopping wherever he sees a pleasant inn or a pretty face, spending money like water, and never risking a hair of his head."

It never occurred to him that maybe his was the luck. And while the aide-de-camp galloped on and the sound of his horse's hoofs grew fainter and fainter down the road toward the village, the comet came sailing swiftly on overhead, deluging the fortifications with a blinding orange-yellow light. It could not have been more than a mile away when Biedenkopf saw it. Instantly his trained eye recognized the fact that this strange round object shooting through the air was no wandering celestial body.

"Ein Flieger!" he cried hoarsely, staring at it in astonishment, knowing full well that no dirigible or aeroplane of German manufacture bore any resemblance to this extraordinary voyager of the air.

A hundred yards down the road his field telephone was attached to a poplar, and casting one furtive look at the Flying Ring he galloped to the tree and rang up the corporal of the guard. But at the very instant that his call was answered a series of terrific detonations shook the earth and set the wires roaring in the receiver, so that he could hear nothing. One--two--three--four of them, followed by a distant answering boom in the west.

And then the whole sky seemed full of fire. He was hurled backward upon the road and lay half-stunned, while
the earth discharged itself into the air with a roar like that of ten thousand shells exploding all together. The ground shook, groaned, grumbled, grated, and showers of boards, earth, branches, rocks, vegetables, tiles, and all sorts of unrecognizable and grotesque objects fell from the sky all about him. It was like a gigantic and never-ending mine, or series of mines, in continuous explosion, a volcano pouring itself upward out of the bowels of an incandescent earth. Above the earsplitting thunder of the eruption he heard shrill cries and raucous shoutings. Mounted men dashed past him down the road, singly and in squadrons. A molten globe dropped through the branches of the poplar, and striking the hard surface of the road at a distance of fifty yards scattered itself like a huge ingot dropped from a blast furnace. Great clouds of dust descended and choked him. A withering heat enveloped him. . . .

It was noon next day when Karl Biedenkopf raised his head and looked about him. He thought first there had been a battle. But the sight that met his eyes bore no resemblance to a field of carnage. Over his head he noticed that the uppermost branches of the poplar had been seared as by fire. The road looked as if the countryside had been traversed by a hurricane. All sorts of débris filled the fields and everywhere there seemed to be a thick deposit of blackened earth. Vaguely realizing that he must report for duty, he crawled, in spite of his bursting head and aching limbs, on all fours down the road toward the village.

But he could not find the village. There was no village there; and soon he came to what seemed to be the edge of a gigantic crater, where the earth had been uprooted and tossed aside as if by some huge convulsion of nature. Here and there masses of inflammable material smoked and flickered with red flames. His eyes sought the familiar outlines of the redoubts and fortifications, but found them not. And where the village had been there was a great cavern in the earth, and the deepest part of the cavern, or so it seemed to his half-blinded sight, was at about the point where the cottage had stood which his general had used as his headquarters, the spot where the night before that general had raised his glass of bubbling wine and toasted "Thanatos," the personification of death, and called his officers to witness that this was the greatest moment in the history of warfare, a moment that they would all remember to their dying day.

For the five days following Thornton's unexpected visit Bennie, existing without sleep and almost without food save for his staple of ready-to-serve chocolate, was the centre of a whirl of books, logarithms, and calculations in the University Library, and constituted himself an unmitigated, if respected, pest at the Cambridge Observatory. Moreover--and this was the most iconoclastic spectacle of all to his conservative pedagogical neighbours in the Appian Way--telegraph boys on bicycles kept rushing to and fro in a stream between the Hooker boarding-house and Harvard Square at all hours of the day and night.

For Bennie had lost no time and had instantly started in upon the same series of experiments to locate the origin of the phenomena which had shaken the globe as had been made use of by Professor von Schwenitz at the direction of General von Helmuth, the Imperial German Commissioner for War, at Mainz. The result had been approximately identical, and Hooker had satisfied himself that somewhere in the centre of Labrador his fellow-scientist--the discoverer of the Lavender Ray--was conducting the operations that had resulted in the dislocation of the earth's axis and retardation of its motion. Filled with a pure and unselfish scientific joy, it became his sole and immediate ambition to find the man who had done these things, to shake him by the hand, and to compare notes with him upon the now solved problems of thermic induction and of atomic disintegration.

But how to get there? How to reach him? For Prof. Bennie Hooker had never been a hundred miles from Cambridge in his life, and a journey to Labrador seemed almost as difficult as an attempt to reach the pole. Off again then to the University Library, with pale but polite young ladies hastening to fetch him atlases, charts, guidebooks, and works dealing with sport and travel, until at last the great scheme unfolded itself to his mind--the scheme that was to result in the perpetuation of atomic disintegration for the uses of mankind and the subsequent alteration of civilization, both political and economic. Innocently, ingeniously, ingenuously, he mapped it all out. No one must know what he was about. Oh, no! He must steal away, in disguise if need be, and reach Pax alone. Three would be a crowd in that communion of scientific thought! He must take with him the notes of his own experiments, the diagrams of his apparatus, and his precious zirconium; and he must return with the great secret of atomic disintegration in his breast, ready, with the discoverer's permission, to give it to the dry and thirsty world. And then, indeed, the earth would blossom like the rose!

A strange sight, the start of the Hooker Expedition!

Doctor Jelly's coloured housemaid had just thrown a pail of blue-gray suds over his front steps--it was 6:30 A.M.--and was on the point of resignedly kneeling and swabbing up the doctor's porch, when she saw the door of the
professor's residence open cautiously and a curious human exhibit, the like of which had ne'er before been seen on sea or land, surreptitiously emerge. It was Prof. Bennie Hooker—disguised as a salmon fisherman!

Over a brand-new sportsman's knickerbocker suit of screaming yellow check he had donned an English mackintosh. On his legs were gaiters, and on his head a helmetlike affair of cloth with a visor in front and another behind, with eartabs fastened at the crown with a piece of black ribbon—in other words a "Glengarry." The suit had been manufactured in Harvard Square, and was a triumph of sartorial art on the part of one who had never been nearer to a real fisherman than a coloured fashion plate. However, it did suggest a sportsman of the variety usually portrayed in the comic supplements, and, to complete the picture, in Professor Hooker's hands and under his arms were yellow pigskin bags and rod cases, so that he looked like the show window of a harness store.

"Fo' de land sakes!" exclaimed the Jellys' coloured maid, oblivious of her suds. "Fo' de Lawd! Am dat Perfesser Hookey?"

It was! But a new and glorified professor, with a soul thrilling to the joy of discovery and romance, with a flash in his eyes, and the savings of ten years in a large roll in his left-hand knickerbocker pocket.

Thus started the Hooker Expedition, which discovered the Flying Ring and made the famous report to the Smithsonian Institution after the disarmament of the nations. But could the nations have seen the expedition as it emerged from its boarding-house that September morning they would have rubbed their eyes.

With the utmost difficulty Prof. Bennie Hooker negotiated his bags and rod cases as far as Harvard Square, where, through the assistance of a friendly conductor with a sense of humour, he was enabled to board an electric surface car to the North Station.

Beyond the start up the River Moisie his imagination refused to carry him. But he had a faith that approximated certainty that over the Height of Land—just over the edge—he would find Pax and the Flying Ring. During all the period required for his experiments and preparations he had never once glanced at a newspaper or inquired as to the progress of the war that was rapidly exterminating the inhabitants of the globe. Thermic induction, atomic disintegration, the Lavender Ray, these were the Alpha, the Sigma, the Omega of his existence.

But meantime[3] the war had gone on with all its concomitant horror, suffering, and loss of life, and the representatives of the nations assembled at Washington had been feverishly attempting to unite upon the terms of a universal treaty that should end militarism and war forever. And thereafter, also, although Professor Hooker was sublimely unconscious of the fact, the celebrated conclave, known as Conference No. 2, composed of the best-known scientific men from every laud, was sitting, perspiring, in the great lecture hall of the Smithsonian Institution, its members shouting at one another in a dozen different languages, telling each other what they did and didn't know, and becoming more and more confused and entangled in an underbrush of contradictory facts and observations and irreconcilable theories until they were making no progress whatever—which was precisely what the astute and plausible Count von Koenitz, the German Ambassador, had planned and intended.

[Footnote 3: Up to the date of the armistice.]

The Flying Ring did not again appear, and in spite of the uncontroverted testimony of Acting-Consul Quinn, Mohammed Ben Ali el Bad, and a thousand others who had actually seen the Lavender Ray, people began gradually, almost unconsciously, to assume that the destruction of the Atlas Mountains had been the work of an unsuspected volcano and that the presence of the Flying Ring had been a coincidence and not the cause of the disruption. So the incident passed by and public attention refocussed itself upon the conflict on the plains of Châlons-sur-Marne. Only Bill Hood, Thornton, and a few others in the secret, together with the President, the Cabinet, and the members of Conference No. 1 and of Conference No. 2, truly apprehended the significance of what had occurred, and realized that either war or the human race must pass away forever. And no one at all, save only the German Ambassador and the Imperial German Commissioners, suspected that one of the nations had conceived and was putting into execution a plan designed to result in the acquisition of the secret of how the earth could be rocked and in the capture of the discoverer. For the Sea Fox, bearing the German expeditionary force, had sailed from Amsterdam twelve days after the conference held at Mainz between Professor von Schwenitz and General von Helmuth, and having safely rounded the Orkneys was now already well on its course toward Labrador. Bennie Hooker, however, was ignorant of all these things. Like an immigrant with a tag on his arm, he sat on the train which bore him toward Quebec, his ticket stuck into the band on his hat, dreaming of a transformer that wouldn't--couldn't--melt at only six thousand degrees.

When Professor Hooker awoke in his room at the hotel in Quebec the morning after his arrival there, he ate a leisurely breakfast, and having smoked a pipe on the terrace, strolled down to the wharves along the river front. Here to his disgust he learned that the Labrador steamer, the Druro, would not sail until the following Thursday—a three days' wait. Apparently Labrador was a less-frequented locality than he had supposed. He mastered his impatience, however, and discovering a library presided over by a highly intelligent graduate of Edinburgh, he became so interested in various profound treatises on physics which he discovered that he almost missed his boat.
Bennie thrilled at the beauty of it. The whaleboat containing Holliday was now right under the ship’s bows. Whirling waves and jets of foam again. All about them, and a mile to seaward, these merry men danced by the score.

“I’d like to see the big salmon cache up at the forks if I can’t do anything else.”

He had emerged from the retirement of his stateroom only on being asked by the steward for his ticket and learning that the Druro was nearing the end of her journey. For nearly two days he had been submerged in Soddy on The Interpretation of Radium. The Druro was running along a sandy, low-lying beach about half a mile offshore. They were nearing the mouth of a wide river. The volume of black fresh water from the Moisie rushed out into the St. Lawrence until it met the green sea water, causing a sharp demarcation of colour and a no less pronounced conflict of natural forces. For, owing to the pressure of the tide against the solid mass of the fresh stream, acres of water unexpectedly boiled on all sides, throwing geysers of foam twenty feet or more into the air, and then subsided. Off the point the engine bell rang twice, and the Druro came to a pause.

Bennie, standing in the bow, in his sportsman’s cap and waterproof, hugging his rod cases to his breast, watched while a heterogeneous fleet of canoes, skiffs, and sailboats came racing out from shore, for the steamer does not land here, but hangs in the offing and lighters its cargo ashore. Leading the lot was a sort of whaleboat propelled by two oars on one side and one on the other, and in the sternsheets sat a rosy-cheeked, good-natured does not land here, but hangs in the offing and lighters its cargo ashore. Leading the lot was a sort of whaleboat propelled by two oars on one side and one on the other, and in the sternsheets sat a rosy-cheeked, good-natured looking man with a smooth-shaven face who Bennie knew must be Malcolm Holliday.

"Hello, Cap!” shouted Holliday. "Any passengers?"

The captain from the pilot house waved contemptuously in Bennie's general direction.

“Howdy!” said Holliday. "What do you want? What can I do for you?"

"I thought I'd try a little salmon fishing," shrieked Bennie back at him.


[Footnote 4: Along the St. Lawrence and the Labrador coast a salmon fisherman is always spoken of by natives and local residents as an "officer," the reason being that most of the sportsmen who visit these waters are English army officers. Hence salmon fishermen are universally termed "officers," and a habitan will describe the sportsmen who have rented a certain river as "les officiers de la Moisie" or "les officiers de la Romaine."]

"Oh!" answered Bennie ruefully. "I didn't know. I supposed I could fish anywhere."

"Well, you can’t!" snapped Holliday, puzzled by the little man's curious appearance.

"I suppose I can go ashore, can’t I?” insisted Bennie somewhat indignantly. "I'll just take a camping trip then. I'd like to see the big salmon cache up at the forks if I can't do anything else."

Instantly Holliday scented something. "Another fellow after gold," he muttered to himself.

Just at that moment, the tide being at the ebb, a hundred acres of green water off the Druro's bow broke into whirling waves and jets of foam again. All about them, and a mile to seaward, these merry men danced by the score. Bennie thrilled at the beauty of it. The whaleboat containing Holliday was now right under the ship's bows.
"I want to look round anyhow," expostulated Bennie. "I've come all the way from Boston." He felt himself treated like a criminal, felt the suspicion in Holliday's eye.

The factor laughed. "In that case you certainly deserve sympathy." Then he hesitated. "Oh, well, come along," he said finally. "We'll see what we can do for you."

A rope ladder had been thrown over the side and one of the sailors now lowered Bennie's luggage into the boat. The professor followed, avoiding with difficulty stepping on his mackintosh as he climbed down the slippery rounds. Holliday grasped his hand and yanked him to a seat in the stern.

"Yes," he repeated, "if you've come all the way from Boston I guess we'll have to put you up for a few days anyway."

A crate of canned goods, a parcel of mail, and a huge bundle of newspapers were deposited in the bow. Holliday waved his hand. The Druro churned the water and swung out into midstream again. Bennie looked curiously after her. To the north lay a sandy shore dotted by a scraggy forest of dwarf spruce and birch. A few fishing huts and a mass of wooden shanties fringed the forest. To the east, seaward, many miles down that great stretch of treacherous, sullen river waited a gray bank of fog. But overhead the air was crystalline with that sparkling, scratchy brilliance that is found only in northern climes. Nature seemed hard, relentless. With his feet entangled in rod cases Professor Hooker wondered for a moment what on earth he was there for, landing on this inhospitable coast. Then his eyes sought the genial face of Malcolm Holliday and hope sprang up anew. For there is that about this genial frontiersman that draws all men to him alike, be they Scotch or English, Canadian habitans or Montagnais, and he is the king of the coast, as his father was before him, or as was old Peter McKenzie, the head factor, who incidentally cast the best salmon fly ever thrown east of Montreal or south of Ungava. Bennie found comfort in Holliday's smile, and felt toward him as a child does toward its mother.

They neared shore and ran alongside a ramshackle pier, up the slippery poles of which Bennie was instructed to clamber. Then, dodging rotten boards and treacherous places, he gained the sand of the beach and stood at last on Labrador. A group of Montagnais picked up the professor's luggage and, headed by Holliday, they started for the latter's house. It was a strange and amusing landing of an expedition the results of which have revolutionized the life of the inhabitants of the entire globe. No such inconspicuous event has ever had so momentous a conclusion. And now when Malcolm Holliday makes his yearly trip home to Quebec, to report to the firm of Holliday Brothers, who own all the nets far east of Anticosti, he spends hours at the Club des Voyageurs, recounting in detail all the circumstances surrounding the arrival of Professor Hooker and how he took him for a gold hunter.

"Anyhow," he finishes, "I knew he wasn't a salmon fisherman in spite of his rods and cases, for he didn't know a Black Dose from a Thunder and Lightning or a Jock Scott, and he thought you could catch salmon with a worm!"

It was true wholly. Bennie did suppose one killed the king of game fish as he had caught minnows in his childhood, and his geologic researches in the Harvard Library had not taught him otherwise. Neither had his tailor.

"My dear fellow," said Holliday as they smoked their pipes on the narrow board piazza at the Post, "of course I'll help you all I can, but you've come at a bad season of the year all round. In the first place, you'll be eaten alive by black flies, gnats, and mosquitoes." He slapped vigorously as he spoke. "And you'll have the devil of a job getting canoe men. You see all the Montagnais are down here at the settlement 'making their mass.' Once a year they leave the hunting grounds up by the Divide and beyond and come down river to 'faire la messe'--it's a sacred duty with 'em. They're very religious, as you probably know--a fine lot, too, take 'em altogether, gentle, obedient, industrious, polite, cheerful, and fair to middling honest. They have a good deal of French blood--a bit diluted, but it's there."

"Can't I get a few to go along with me?" asked Bennie anxiously.

"That's a question," answered the factor meditatively. "You know how the birds--how caribou--migrate every year. Well, these Montagnais are just like them. They have a regular routine. Each man has a line of traps of his own, all the way up to the Height of Land. They all go up river in the autumn with their winter's supply of pork, flour, tea, powder, lead, axes, files, rosin to mend their canoes, and castoreum--made out of beaver glands, you know--to take away the smell of their hands from the baited traps. They go up in families, six or seven canoes together, and as each man reaches his own territory his canoe drops out of the procession and he makes a camp for his wife and babies. Then he spends the winter--six or seven months--in the woods following his line of traps. By and by the ice goes out and he begins to want some society. He hasn't seen a priest for ten months or so, and he's afraid of the loup-garou, for all I know. So he comes down river, takes his Newport season here at Moisie, and goes to mass and staves off the loup-garou. They're all here now. Maybe you can get a couple to go up river and maybe you can't."

Then observing Bennie's crestfallen expression, he added:

"But we'll see. Perhaps you can get Marc St. Ange and Edouard Moreau, both good fellows. They've made their mass and they know the country from here to Ungava. There's Marc now--Venez ici, Marc St. Ange." A swarthy, lithe Montagnais was coming down the road, and Holliday addressed him rapidly in habitan French: "This
A gentleman wishes to go up river to the forks to see the big cache. Will you go with him?"

The Montagnais bowed to Professor Hooker and pondered the suggestion. Then he gesticulated toward the north and seemed to Bennie to be telling a long story.

Holliday laughed again. "Marc says he will go," he commented shortly. "But he says also that if the Great Father of the Marionettes is angry he will come back."

"What does he mean by that?" asked Bennie.

"Why, when the aurora borealis--Northern Lights--plays in the sky the Indians always say that the 'marionettes are dancing.' About four weeks ago we had some electrical disturbances up here and a kind of an earthquake. It scared these Indians silly. There was a tremendous display, almost like a volcano. It beat anything I ever saw, and I've been here fifteen years. The Indians said the Father of the Marionettes was angry because they didn't dance enough to suit him, and that he was making them dance. Then some of them caught a glimpse of a shooting star, or a comet, or something, and called it the Father of the Marionettes. They had quite a time--held masses, and so on--and were really cut up. But the thing is over now, except for the regular, ordinary display."

"When can they be ready?" inquired Bennie eagerly.

"To-morrow morning," replied Holliday. "Marc will engage his uncle. They're all right. Now how about an outfit? But don't talk any more about salmon. I know what you're after--it's gold!"

* * * * *

The moon was still hanging low over the firs at four o'clock the next morning when three black and silent shadows emerged from the factor's house and made their way, cautiously and with difficulty, across the sand to where a canoe had been run into the riffles of the beach. Marc came first, carrying a sheet-iron stove with a collapsible funnel; then his Uncle Edouard, shouldering a bundle consisting of a tent and a couple of sacks of flour and pork; and lastly Professor Hooker with his mackintosh and rifle, entirely unaware of the fact that his careful guides had removed all the cartridges from his luggage lest he should shoot too many caribou and so spoil the winter's food supply. It was cold, almost frosty. In the black flood of the river the stars burned with a chill, wavering light. Bennie put on his mackintosh with a shiver. The two guides quietly piled the luggage in the centre of the canoe, arranged a seat for their passenger, picked up their paddles, shoved off, and took their places in bow and stern.

No lights gleamed in the windows of Moisie. The lap of the ripples against the birch side of the canoe, the gurgle of the water round the paddle blades, and the rush of the bow as, after it had paused on the withdraw, it leaped forward on the stroke, were the only sounds that broke the deathlike silence of the semi-arctic night. Bennie struck a match, and it flared red against the black water as he lit his pipe, but he felt a great stirring within his little breast, a great courage to dare, to do, for he was off, really off, on his great hunt, his search for the secret that would remake the world. With the current whispering against its sides the canoe swept in a wide circle to midstream. The moon was now partially obscured behind the treetops. To the east a faint glow made the horizon seem blacker than ever. Ahead the wide waste of the dark river seemed like an engulfing chasm. Drowsiness enwrapped Professor Hooker, a drowsiness intensified by the rhythmic swinging of the paddles and the pile of bedding against which he reclined. He closed his eyes, content to be driven onward toward the region of his hopes, content almost to fall asleep.

"Hi!" suddenly whispered Marc St. Ange. "Voilà! Le père des marionettes!"

Bennie awoke with a start that almost upset the canoe. The blood rushed to his face and sang in his ears.

"Where?" he cried. "Where?"

"Au nord," answered Marc. "Mais il descend!"

Professor Hooker stared in the direction of Marc's uplifted paddle. Was he deceived? Was the wish father to the thought? Or did he really see at an immeasurable distance upon the horizon a quickly dying trail of orange-yellow light? He rubbed his eyes--his heart beating wildly under his sportsman's suiting. But the north was black beyond the coming dawn.

Old Edouard grunted.

"Vous êtes fou!" he muttered to his nephew, and drove his paddle deep into the water.

Day broke with staccato emphasis. The sun swung up out of Europe and burned down upon the canoe with a heat so equatorial in quality that Bennie discarded both his mackintosh and his sporting jacket. All signs of human life had disappeared from the distant banks of the river and the bow of the canoe faced a gray-blue flood emerging from a wilderness of scrubby trees. A few gulls flopped their way coastward, and at rare intervals a salmon leaped and slashed the slow-moving surface into a boiling circle; but for the rest their surroundings were as set, as immobile, as the painted scenery of a stage, save where the current swept the scattered promontories of the shore. But they moved steadily north. So wearied was Bennie with the unaccustomed light and fresh air that by ten o'clock he felt the day must be over, although the sun had not yet reached the zenith. Unexpectedly Marc and Edouard
turned the canoe quietly into a shallow, and beached her on a spit of white sand. In three minutes Edouard had a small fire snapping, and handed Bennie a cup of tea. How wonderful it seemed—a genuine elixir! And then he felt the stab of a mosquito, and putting up his hand found it blotched with blood. And the black flies came also. Soon the professor was tramping up and down, waving his handkerchief and clutching wildly at the air. Then they pushed off again.

The sun dropped westward as they turned bend after bend, disclosing ever the same view beyond. Shadows of rocks and trees began to jut across the eddies. A great heron, as big as an ostrich, or so he seemed, arose awkwardly and flapped off, trailing yards of legs behind him. Then Bennie put on first his jacket and then his mackintosh. He realized that his hands were numb. The sun was now only a foot or so above the sky line.

This time it was Marc who grunted and thrust the canoe toward the river's edge with a sideways push. It grounded on a belt of sand and they dragged it ashore. Bennie, who had been looking forward to the night with vivid apprehension, now discovered to his great happiness that the chill was keeping away the black flies. Joyfully he assisted in gathering dry sticks, driving tent pegs, and picking reindeer moss for bedding. Then as darkness fell Edouard fried eggs and bacon, and with their boots off and their stockinged feet toasting to the blaze the three men ate as becomes men who have laboured fifteen hours in the open air. They drank tin cups of scalding tea, a pint at a time, and found it good; and they smoked their pipes with their backs propped against the tree trunks and found it heaven. Then as the stars came out and the woods behind them snapped with strange noises, Edouard took his pipe from his mouth.

"It's getting cold," said he. "The marionettes will dance to-night."

Bennie heard him as if across a great, yawning gulf. Even the firelight seemed hundreds of yards away. The little professor was "all in," and he sat with his chin dropped again to his chest, until he heard Marc exclaim:

"Voilà! Elles dansent!"

He raised his eyes. Just across the black, silent sweep of the river three giant prismatic searchlights were playing high toward the polestar, such searchlights as the gods might be using in some monstrous game. They wavered here and there, shifting and dodging, faded and sprang up again, till Bennie, dizzy, closed his eyes. The lights were still dancing in the north as he stumbled to his couch of moss.

"Toujour les marionettes!" whispered Marc gently, as he might to a child. "Bon soir, monsieur."

The tent was hot and dazzling white above his head when low voices, footsteps, and the clink of tin against iron aroused the professor from a profound coma. The guides had already loaded the canoe and were waiting for him. The sun was high. Apologetically he pulled on his boots, and stepping to the sand dashed the icy water into his face. His muscles groaned and rasped. His neck refused to respond to his desires with its accustomed elasticity. But he drank his tea and downed his scrambled eggs with an enthusiasm unknown in Cambridge, Massachusetts. Marc gave him a hand into the canoe and they were off. The day had begun.

The river narrowed somewhat and the shores grew more rocky. At noon they lunched on another sand-spit. At sunset they saw a caribou. Night came. "Always the marionettes." Thus passed nine days—like a dream to Bennie; and then came the first adventure.

It was about four o'clock on the afternoon of the tenth day of their trip up the Moisie when Marc suddenly stopped paddling and gazed intently shoreward. After a moment he said something in a low tone to Edouard, and they turned the canoe and drove it rapidly toward a small cove half hidden by rocks. Bennie, straining his eyes, could see nothing at first, but when the canoe was but ten yards from shore he caught sight of the motionless figure of a man, lying on his face with his head nearly in the water. Bennie saw instantly that it was broken. The Indian's face was white and drawn, no doubt with pain.

"Il est mort!" said Marc slowly, crossing himself.

Edouard shrugged his shoulders and fetched a small flask of brandy from the professor's sack. Forcing open the jaws, he poured a few drops into the man's mouth. The Indian choked and opened his eyes. Edouard grunted.

"La jeunesse pense qu'elle sait tout!" he remarked scornfully.

Thus they found Nichicun, without whom Bennie might never have accomplished the object of his quest. It took three days to nurse the half-dead and altogether starved Montagnais back to life, but he received the tenderest care. Marc shot a young caribou and gave him the blood to drink, and made a ragout to put the flesh back on his bones. Meanwhile the professor slept long hours on the moss and took a much-needed rest; and by degrees they learned from Nichicun the story of his misfortune—the story that forms a part of the chronicle of the expedition, which can be read at the Smithsonian Institution.

He was a Montagnais, he said, with a line of traps to the northeast of the Height of Land, and last winter he had had very bad luck indeed. There had been less and less in his traps and he had seen no caribou. So he had taken his wife, who was sick, and had gone over into the Nascopee country for food, and there his wife had died. He had
made up his mind very late in the season to come down to Moisie and make his mass and get a new wife, and start a fresh line of traps in the autumn. All the other Montagnais had descended the river in their canoes long before, so he was alone. His provisions had given out and he saw no caribou. He began to think he would surely starve to death. And then one evening, on the point just above their present camp, he had seen a caribou and shot it, but he had been too weak to take good aim and had only broken its shoulder. It lay kicking among the boulders, pushing itself along by its hind legs, and he had feared that it would escape. In his haste to reach it he had slipped on a wet rock and fallen and broken his leg. In spite of the pain he had crawled on, and then had taken place a wild, terrible fight for life between the dying man and the dying beast.

He could not remember all that had occurred--he had been kicked, gored, and bitten; but finally he had got a grip on its throat and slashed it with his knife. Then, lying there on the ground beside it, he drank its blood and cut off the raw flesh in strips for food. Finally one day he had crawled to the river for water and had fainted.

The professor and his guides made for the Indian a hut of rocks and bark, and threw a great pile of moss into the corner of it for him to lie on. They carved a splint for his leg and bound it up, and cut a huge heap of firewood for him, smoking caribou meat and hanging it up in the hut. Somebody would come up river and find him, or if not, the three men would pick him up on their return. For this was right and the law of the woods. But never a word of particular interest to Prof. Bennie Hooker did Nichicun speak until the night before their departure, although the reason and manner of his speaking were natural enough. It happened as follows: but first it should be said that the Nascopees are an ignorant and barbarous tribe, dirty and treacherous, upon whom the Montagnais look down with contempt and scorn. They do not even wear civilized clothes, and their ways are not the ways of les bons sauvages. They have no priests; they do not come to the coast; and the Montagnais will not mingle with them. Thus it bespoke the hunger of Nichicun that he was willing to go into their country.

As he sat round the fire with Marc and Edouard on that last night, Nichicun spoke his mind of the Nascopees, and Marc translated freely for Bennie's edification.

No, the injured Montagnais told them, the Nascopees were not nice; they were dirty. They ate decayed food and they never went to mass. Moreover, they were half-witted. While he was there they were all planning to migrate for the most absurd reason--what do you suppose? Magic! They claimed the end of the world was coming! Of course it was coming some time. But they said now, right away. But why? Because the marionettes were dancing so much. And they had seen the Father of the Marionettes floating in the sky and making thunder! Fools! But the strangest thing of all, they said they could hunt no longer, for they were afraid to cross something--an iron serpent that stung with fire if you touched it, and killed you! What foolishness! An iron serpent! But he had asked them and they had sworn on the holy cross that it was true.

Bennie listened with a chill creeping up his spine. But it would never do to hint what this disclosure meant to him. Between puffs of his pipe he asked casual, careless questions of Nichicun. These Nascopees, for instance, how far off might their land be? And where did they assert this extraordinary serpent of iron to be? Were there rivers in the Nascopee country? Did white men ever go there? All these things the wounded Montagnais told him. It appeared, moreover, that the Rassini River was near the Nascopee territory, and that it flowed into the Moisie only seven miles above the camp. All that night the marionettes danced in Bennie's brain.

Next morning they propped Nichicun on his bed of moss, laid a rifle and a box of matches beside him, and bade him farewell. At the mouth of the Rassini River Prof. Bennie Hooker held up his hand and announced that he was going to the Nascopee country. The canoe halted abruptly. Old Edouard declared that they had been engaged only to go to the big cache, and that their present trip was merely by way of a little excursion to see the river. They had no supplies for such a journey, no proper amount of ammunition. No, they would deposit the professor on the nearest sandbar if he wished, but they were going back.

Bennie arose unsteadily in the canoe and dug into his pocket, producing a roll of gold coin. Two hundred and fifty dollars he promised them if they would take him to the nearest tribe of Nascopees; five hundred if they could find the Iron Serpent.

"Bien!" exclaimed both Indians without a moment's hesitation, and the canoe plunged forward up the Rassini.

Once more a dreamlike succession of brilliant, frosty days; once more the star-studded sky in which always the marionettes danced. And then at last the great falls of the Rassini, beyond which no white man had gone. They hid the canoe in the bushes and placed beneath it the iron stove and half their supply of food. Then they plunged into the brush, eastward. Bennie had never known such grueling work and heartbreaking fatigue; and the clouds of flies pursued them venomously and with unrelenting persistence. At first they had to cut their way through acres of brush, and then the land rose and they saw before them miles of swamp and barren land dotted with dwarf trees and lichen-grown rocks. Here it was easier and they made better time; but the professor's legs ached and his rifle wore a red bruise on his shoulder. And then after five days of torment they came upon the Iron Rail. It ran in almost a direct line from northwest to southwest, with hardly a waver, straight over the barrens and through the forests of scrub,
with a five-foot clearing upon either side. At intervals it was elevated to a height of eight or ten inches upon insulated iron braces. Both Marc and Edouard stared at in wonder, while Bennie made them a little speech.

It was, he said, a thing called a "monorail," made by a man who possessed strange secrets concerning the earth and the properties of matter. That man lived over the Height of Land toward Ungava. He was a good man and would not harm other good men. But he was a great magician—if you believed in magic. On the rail undoubtedly he ran something called a gyroscopic engine, and carried his stores and machinery into the wilderness. The Nascopiees were not such fools after all, for here was the something they feared to cross—the iron serpent that bit and killed. Let them watch while he made it bite. He allowed his rifle to fall against the rail, and instantly a shower of blue sparks flashed from it as the current leaped into the earth.

Bennie counted out twenty-five golden eagles and handed them to Edouard. If they followed the rail to its source he would, he promised, on their return to civilization give them as much again. Without more ado the Indians lifted their packs and swung off to the northwest along the line of the rail. The stock of Prof. Bennie Hooker had risen in their estimation. On they ploughed across the barrens, through swamps, over the quaking muskeg, into the patches of scrub growth where the short branches slapped their faces, but always they kept in sight of the rail.

* * * * *

The extraordinary announcement, transmitted from various European news agencies, that an attempt had been made by the general commanding the First Artillery Division of the German Army of the Meuse to violate the armistice, had caused a profound sensation, particularly as the attempt to destroy Paris had been prevented only by the sudden appearance of the same mysterious Flying Ring that had shortly before caused the destruction of the Atlas Mountains and the flooding of the Sahara Desert by the Mediterranean Sea.

The advent of the Flying Ring on this second occasion had been noted by several hundred thousand persons, both soldiers and non-combatants. At about the hour of midnight, as if to observe whether the warring nations intended sincerely to live up to their agreement and bring about an actual cessation of hostilities, the Ring had appeared out of the north and, floating through the sky, had followed the lines of the belligerents from Brussels to Verdun and southward. The blinding yellow light that it had projected toward the earth had roused the soldiers sleeping in their intrenchments and caused great consternation all along the line of fortifications, as it was universally supposed that the director of its flight intended to annihilate the combined armies of France, England, Germany, and Belgium. But the Ring had sailed peacefully along, three thousand feet aloft, deluging the countryside with its dazzling light, sending its beams into the casemates of the huge fortresses of the Rhine and the outer line of the French fortifications, searching the redoubts and trenches, but doing no harm to the sleeping armies that lay beneath it; until at last the silence of the night had been broken by the thunder of "Thanatos," and in the twinkling of an eye the Lavender Ray had descended, to turn the village of Champaubert into the smoking crater of a dying volcano. The entire division of artiller y had been annihilated, with the exception of a few stragglers, and of the Relay Gun naught remained but a distorted puddle of steel and iron.

Long before the news of the horrible retribution visited by the master of the Ring upon Treitschke, the major-general of artillery, and the inventor, Von Heckmann, had reached the United States, Bill Hood, sitting in the wireless receiving station of the Naval Observatory at Georgetown, had received through the ether a message from his mysterious correspondent in the north that sent him hurrying to the White House. Pax had called the Naval Observatory and had transmitted the following ultimatum, repeating it, as was his custom, three times:

"To the President of the United States and to All Mankind:

I have put the nations to the test and found them wanting. The solemn treaty entered into by the ambassadors of the belligerent nations at Washington has been violated. My attempt by harmless means to compel the cessation of hostilities and the abolition of war has failed. I cannot trust the nations of the earth. Their selfishness, their bloodthirstiness, and greed, will inevitably prevent their fulfilling their agreements with me or keeping the terms of their treaties with one another, which they regard, as they themselves declare, merely as 'scraps of paper.' The time has come for me to compel peace. I am the dictator of human destiny and my will is law. War shall cease. On the 10th day of September I shall shift the axis of the earth until the North Pole shall be in the region of Strassburg and the South Pole in New Zealand. The habitable zone of the earth will be hereafter in South Africa, South and Central America, and regions now unfrequented by man. The nations must migrate and a new life in which war is unknown must begin upon the globe. This is my last message to the human race.

"PAX."

The conference of ambassadors summoned by the President to the White House that afternoon exhibited a character in striking contrast with the first, at which Von Koenitz and the ambassadors from France, Russia, and England had had their memorable disagreement. It was a serious, apprehensive, and subdued group of gentlemen that gathered round the great mahogany table in the Cabinet chamber to debate what course of action the nations should pursue to avert the impending calamity to mankind. For that Pax could shift the axis of the earth, or blow the
flies and mosquitoes, Hooker and Marc and Edouard staggered through the brush, following the monorail. They had
and diverted its course. The lakes that it fed had all dried up.
Nascopees, who took him to the coast. A great explosion, they told him, had torn the River Nascopee from its bed
he found his way somehow across the quaking bog, after all his comrades had died of thirst, and reached a tribe of
ooze. And with the sun came millions of mosquitoes and flies, and drove the men and mules frantic with their stings.

boat was hard and fast aground, and when the gray daylight came stealing across the lake there was no lake to be
confusion prevailed among the members of the expedition, since they were almost out of sight of land and the draft
seemed to be a mud bank. At about the same instant the other barges struck bottom. Intense excitement and
against the bows, the foremost motorboat grounded.

And while the men smoked and sang "Die Wacht am Rhein," listening to the trill of the ripples
as they ploughed through the gray mists--a strange and terrible sight for the Nascopees lurking in the underbrush
a great lake that lay like a silver mirror for miles about them. The moon rose and turned the boats into weird shapes
mosquitoes. Without labour, without anxiety, the fourteen barges bored through the swift currents and at last reached

General von Helmuth and Professor von Schwenitz. Once north of the Orkneys it had encountered fair weather, and
it had reached Hamilton Inlet in ten days without mishap, and with the men and animals in the best of condition. At
Rigolet the men had disembarked and loaded their howitzers, mules, and supplies upon the flat-bottomed barges
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against the bows, the foremost motorboat grounded.
The terrible fate of the German expeditionary force is too well known to require comment. As has been already
told, the Sea Fox had sailed from Amsterdam twelve days after the conference in the War Office at Mainz between
General von Helmuth and Professor von Schwenitz. Once north of the Orkneys it had encountered fair weather, and
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against the bows, the foremost motorboat grounded.
The momentum of the barge immediately following could not be checked, and she in turn drove into what
seemed to be a mud bank. At about the same instant the other barges struck bottom. Intense excitement and
confusion prevailed among the members of the expedition, since they were almost out of sight of land and the draft
of the motorboats was only nineteen inches. But no efforts could move the barges from where they were. All night
long the propellers churned the gleaming water of the lake to foam, but without result. Each and every barge and
boat was hard and fast aground, and when the gray daylight came stealing across the lake there was no lake to be
seen, only a reeking marsh, covered for miles with a welter of green slime and decaying vegetable matter across
which it would seem no human being or animal could flounder. As far as the eye could reach lay only a blackish
ooze. And with the sun came millions of mosquitoes and flies, and drove the men and mules frantic with their stings.

Only one man, Ludwig Helmer, a gun driver from Potsdam, survived. Half mad with the flies and nearly naked,
he found his way somehow across the quaking bog, after all his comrades had died of thirst, and reached a tribe of
Nascopees, who took him to the coast. A great explosion, they told him, had torn the River Nascopee from its bed
and diverted its course. The lakes that it fed had all dried up.

Blinded by perspiration, sweltering under the heavy burden of their outfit, goaded almost to frenzy by the black
flies and mosquitoes, Hooker and Marc and Edouard staggered through the brush, following the monorail. They had
already reached the summit of the Height of Land and where now working down the northern slope in the direction of Ungava. The land was barren beyond the imagination of the unimaginative Bennie. Small dwarfed trees struggled for a footing amid the lichen-covered outcroppings and sun-dried moss of the hollows. The slightest rise showed mile upon mile of great waste undulating interminably in every direction. The heat shimmering off the rocks was almost suffocating. At noon on September 10th they threw themselves into the shade of a narrow ledge, boiled some tea, and smoked their pipes, wildly fanning the air to drive away the swarms of insects that attacked them.

Hooker was half drunk from lack of sleep and water. Already once or twice he had caught himself wandering when talking to Marc and Edouard. The whole thing was like a horrible, disgusting nightmare. And then he suddenly became aware that the two Indians were staring intently through the clouds of mosquitoes over the tree tops to the eastward. Through the sweat that trickled into his eyes he tried to make out what they could see. But he could discern nothing except mosquitoes. And then he thought he saw a mosquito larger than all the others. He waved at it, but it remained where it was. A slight breeze momentarily wafted the swarm away, and he still saw the big mosquito hovering over the horizon. Then he heard Marc cry out:

"Quelque chose vol en l'air!"

He rubbed the moisture out of his eyes and stared at the mosquito, which was growing bigger every minute. With the velocity of a projectile, this monstrous insect, or whatever it was, came sweeping up behind them from the Height of Land, soaring into the zenith in a great parabola, until with a shiver of excitement Bennie recognized that it was the Flying Ring.

"It's him," he chattered emphatically, if ungrammatically.

Marc and Edouard nodded.

"Oui, oui!" they cried in unison. "C'est celui que vous cherchez!"

"Il retourne chez lui," said Marc.

And then Bennie, without offering any explanation, found himself dancing up and down upon the rocks in the dizzying sun, waving his hat and shouting to the Father of the Marionettes. What he shouted he never knew. And Marc and Edouard both shouted, too. But the master of the Ring heard them not, or if he heard he paid them no attention. Nearer and nearer came the Ring, until Bennie could see the gleaming cylinder of its great steel circle. At a distance of about two miles it swept through the air over a low ridge, and settled toward the earth in the direction of Ungava.

"He only goes ten mile maybe," announced Marc confidently. "Un petit bout de chemin. We get there to-night."

On they struggled beside the Rail, but now hope ran high. Bennie sang and whistled, unmindful of the mosquitoes and black flies that renewed their attacks with unremitting ferocity. The sun lowered itself into the pine trees, shooting dazzling shafts through the low branches, and then sank in a welter of crimson-yellow light. The sky turned gray in the east; faint stars twinkled through the quivering waves that still shook from the overheated rocks. It turned cold and the mosquitoes departed. Hugging the Rail, they staggered on, now over shaking muskeg, now through thickets of tangled brush, now on great ledges of barren rock, and then across caribou barrens knee-deep in dry and crackling moss. Darkness fell and prudence dictated that they should make camp. But in their excitement they trudged on, until presently a pale glow behind the dwarfed trees showed that the moon was rising. They boiled the water, made tea, and cooked some biscuits. Soon they could see to pursue their way.

"Most there now," encouraged Marc.

Presently, instead of descending, they found the land was rising again, and forcing their way through the undergrowth they struggled up a rocky hillside, perhaps three hundred feet in height. Marc was in the lead, with Bennie a few feet behind him. As they reached the crest the Indian turned and pointed to something in front of him that Bennie was unable to distinguish.

"Nous sommes arrivees," he announced.

With his heart thumping from the exertion of the climb, Bennie crawled up beside his guide and found himself confronted by a strong barbed-wire entanglement affixed to iron stanchions firmly imbedded in the rocks. They were on the top of a ridge that dropped away abruptly at their feet into a valley, perhaps a mile in width, terminating on the other side in perpendicular cliffs, estimated by Bennie to be about eight hundred or a thousand feet in height. Although the entanglement was by no means impassable, it was a distinct obstacle and one they preferred to tackle by daylight. Moreover, it indicated that their company was undesired. They were in the presence of an unknown quantity, the master of the Flying Ring. Whether he was a malign or a benevolent influence, this Father of the Marionettes, they could not tell.

With his back propped against a small spruce Bennie focused his glasses upon dim shapes barely discernible in the midst of the valley. He was thrilled by a deep excitement, a strange fear. What would he see? What mysteries would those vague forms disclose? The shadows cast by the cliffs and a light mist gathering in the low ground made it difficult to see; and then, even as he looked, the moon rose higher and shone through something in the middle of
the valley that looked like a tall, grisly skeleton. It seemed to have legs and arms, an odd mushroom-shaped head, and endless ribs. Below and at its feet were other and vaguer shapes--flat domes or cupolas, bombproofs perhaps, buildings of some sort--Pax's home beyond peradventure.

As he looked through the glasses at the skeleton-like tower Bennie had an extraordinary feeling of having seen it all before somewhere. As in a long-forgotten dream he remembered Tesla's tower near Smithtown, on Long Island. And this was Tesla's tower, naught else! It is a strange thing, how at great crises of our lives come feelings of anticipatory knowledge. There is, indeed, nothing new under the sun; else had Bennie been more afraid. As it was, he saw only Tesla's Smithtown tower with its head like a young mushroom. And at the same time there flashed into his memory: "Childe Harold to the Dark Tower Came." Over and over he repeated it mechanically, feeling that he might be one of those of whom the poet had sung. Yet he had not read the lines for years:

"Burningly it came on me all at once, This was the place!... What in the midst lay but the Tower itself? His eyes searched the shadows round the base of the tower, for his ears had already caught a faint, almost inaudible throbbing that seemed to grow from moment to moment. There certainly was a dull vibration in the air, a vibration like the distant hum of machinery. Suddenly old Edouard touched Bennie upon the shoulder.

"Regardez!" he whispered.

Some transformation was happening in the hood of the tower. From a black opaque object it began to turn a dull red and to diffuse a subdued glow, while the hum turned into a distinct whir.

Bennie became almost hysterical with excitement.

Soon the hood of the tower had turned white and the glow had increased until the whole valley was lit up with a suffused and gentle light. The Ring could be distinctly seen about half a mile away, resting upon a huge circular support.

"C'est le feu!" grunted Marc. "C'est ainsi que l'on fait danser les marionettes!"

There was no doubt that the hood of the tower was in fact white hot, for the perpendicular cliffs of the mountain across the valley sharply reflected the light that it disseminated. The humming whir of the great alternator rose gradually into a scream like the outcry of some angry thing. And then unexpectedly a shaft of pale lavender light shot out from the glowing hood and lost itself in the blackness of the midnight sky. Now appeared a wonderful and beautiful spectacle: immediately above the point where the rays disappeared into the ether hundreds of points of yellow fire suddenly sprang into being in the sky, darting hither and thither like fireflies, some moving slowly and others with such speed they appeared as even, luminous lines.

"Les marionettes! Les marionettes!" Marc cried trembling.

"Not at all! Not at all! They are meteorites!" answered Bennie, entirely engrossed in the scientific phase of the matter and forgetting that he did not speak the other's language. "Space is jammed full of meteoric dust. The larger particles, which strike our atmosphere and which ignite by friction, form shooting stars. The Ray--the Lavender Ray--reaching out into the most distant regions of space meets them in countless numbers and disintegrates them, surrounding them with glowing atmospheres. By George, though, if he starts in playing the Ray upon that cliff we've got to stand from under! Look here, boys," he shouted, "stuff something in your ears." He seized his handkerchief, tore it apart, and, making two plugs, thrust them into the openings of his ears as far as the drums. The others in wonderment followed his example.

"He's going to rock the earth!" cried Bennie Hooker. "He's going to rock the earth again!"

Slowly the Lavender Ray swung through the ether, followed by its millions of meteorites, dipping downward toward the northern side of the valley and sinking ever lower and lower toward the cliff. Bennie threw himself flat on his stomach upon the ridge, pressing his hands to his ears, and the others, feeling that something terrible was going to happen, followed his example. Nearer and nearer toward the ridge dropped the Ray. Bennie held his breath. Another instant and there came a blinding splash of yellow light, a crash like thunder, and a roar that seemed to tear the mountain from its base. The earth shook. Into the zenith sprang a flame of incandescent vapour a mile in height. The tumult increased. Vivid blue flashes of lightning shot out from the spot upon which the Ray played. The air was filled with thunderings, and the ground beneath them rose and fell and swung from side to side. Then came a mighty wind, nay, a cyclone, and gravel and broken branches fell upon them, and suffocating clouds of dust filled their eyes and shut out from time to time what was occurring in the valley. The face of the cliff glowed like the interior of a furnace, and the blazing yellow blast of glowing helium shot over their heads and off into space, making the night sky light as day.

For a moment they all lay stunned and sightless. Then the discharge appeared to diminish both in volume and in intensity. The air cleared somewhat and the ground no longer trembled. The burst of flame slowly subsided, like a fountain that is being gradually turned off. Either the Ring man wasn't going to rock the earth or he had lost control of his machinery.

Something was clearly going wrong. Showers of sparks fell from the hood and occasionally huge glowing
masses of molten metal dropped from it. And now the Lavender Ray began slowly to sweep down the face of the cliff; and the yellow blast of helium gradually faded away until it was scarcely visible. The roar of the alternator died down, first to a hum and then to a purr.

"Something's busted," thought Bennie, "and he's shut it off."

The Ray had now reached the bottom of the cliff and was sweeping across the ground toward the base of the tower, its path being marked by a small travelling volcano that hurled its smoke and steam high into the air. It was evident to Bennie that the hood of the tower was slowly turning over, and that the now fast-fading Ray would presently play upon its base and the adjacent cupola in which the master of the Ring was probably attempting to control his recalcitrant machinery.

And then Bennie lost consciousness.

* * * * *

A splash of rain. He awoke, and found himself lying by the barbed-wire fence in the graying light of dawn. His muscles were stiff and sore, but he felt a strange sense of exhilaration. A mist was driving across the valley and enshrouding the scene of the night's debacle. Through the rain gusts he could see, still standing, the wreck of the tower, with a fragment of melted inductor drooping from its apex--and a long way off the Ring. The base of the tower and its surroundings were lost in mist. He crawled to his knees and looked about him for Marc and Edouard, but they had disappeared. His field glasses lay beside him, and he picked them up and raised himself to his feet. Like stout Cortés, silent upon his peak in Darien, he surveyed the Pacific of his dreams. For the Ring was still there! Pax might be annihilated, his machinery destroyed, but the secret remained--and it was his, Bennie Hooker's, of Appian Way, Cambridge, Massachusetts! In his excitement, in getting over the fence he tore a jagged hole in what was left of his sporting suit, but in a moment more he was scrambling down the ridge into the ravine.

He found it no easy task to climb down the jagged face of the cliff, but twenty minutes of stiff work landed him in the valley and within a thousand yards of the stark remains of the tower. Between where he stood and the devastation caused by the culminating explosion of the night before, the surface of the earth showed the customary ledges of barren rock, the scraggy scattering of firs, and stretches of moss with which he had become so familiar. Behind him the monorail, springing into space from the crest of the hill, ended in the dangling wreckage of a trestle which evidently had terminated in a station, now vanished, near the tower. From his point of observation little of the results of the upheaval was noticeable except the débris, which lay in a film of shattered rock and gravel over the surface of the ground, but as he ran toward the tower the damage caused by the Ray quickly became apparent.

At the distance of two hundred yards from the base he paused astounded. Why anything of the tower remained at all was a mystery, explicable only by reason of the skeleton-like character of its construction. All about it the surface had been rent as by an earthquake, and save for a fragment of the dome or bombproof all trace of buildings had disappeared. A glistening lake of leperous-like molten lead lay in the centre of the crater, strangely iridescent. A broad path of destruction, fifty yards or so in width, led from the scene of the disruption to the precipice against which the Ray had played. The face of the cliff itself seemed covered with a white coating or powder which gave it a ghostly sheen. Moreover, the rain had turned to snow and already the entire aspect of the valley had changed.

Bennie stood wonderingly on the edge of this inferno. He was cold, famished, horror-stricken. Like a flash in a pan the mechanism which had rocked the earth and dislocated its axis had blown out; and there was now nothing left to tell the story, for its inventor had flashed out with it into eternity. At his very feet a conscious human being, only twelve short hours before, had by virtue of his stupendous brain been able to generate and control a force capable of destroying the planet itself, and now--! He was gone! It was all gone! Unless somewhere hard by was hovering amid the whirling snowflakes that which might be his soul. But Pax would send no more messages! Bennie's journey had gone for naught. He had arrived just too late to talk it all over with his fellow-scientist, and discuss those little improvements on Hiroshito's theory. Pax was dead!

He sat down wearily, noticing for the first time that his ears pained him. In his depression and excitement he had totally forgotten the Ring. He wondered how he was ever going to get back to Cambridge. And then as he raised his hand to adjust his Glengarry he saw it awaiting him--uncathed. Far to the westward it rested snugly in its gigantic nest of crossbeams, like the head of some colossal decapitated Chinese mandarin. With an involuntary shout he started running down the valley, heedless of his steps. Nearer and higher loomed the steel trestlework upon which rested the giant engine. Panting, he blindly stumbled on, mindful only of the momentous fact that Pax's secret was not lost.

Fifty feet above the ground, supported upon a cylindrical trestle of steel girders, rested the body of the car, constructed of aluminum plates in the form of an anchor ring some seventy-five feet in diameter, while over the circular structure of the Ring itself rose a skeleton tower like a tripod, carrying at its summit a huge metal device shaped like a thimble, the open mouth of which pointed downward through the open centre of the machine. Obviously this must be the tractor or radiant engine. There, too, swung far out from the side of the ring on a
framework of steel, was the thermic inductor which had played the disintegrating Ray upon the Atlas Mountains and the great cannon of Von Heckmann. The whole affair resembled nothing which he had ever conceived of either in the air, the earth, or the waters under the earth, the bizarre invention of a superhuman mind. It seemed as firmly anchored and as immovable as the Eiffel Tower, and yet Bennie knew that the thing could lift itself into the air and sail off like a ball of thistledown before a breeze. He knew that it could do it, for he had seen it with his own eyes.

A few steps more brought him into the centre of the circle of steel girders which supported the landing stage. Here the surface of the earth at his feet had been completely denuded and the underlying rock exposed, evidently by some artificial action, the downward blast of gas from the tractor. Even the rock itself had been seared by the discharge; little furrows worn smooth as if by a mountain torrent radiating in all directions from the central point. More than anything it reminded Bennie of the surface of a meteorite, polished and scarred by its rush through the atmosphere. He paused, filled with a kind of awe. The most wonderful engine of all time waited his inspection. The great secret was his alone. The inventor and his associates had been wiped out of existence in a flash, and the Flying Ring was his by every right of treasure trove. In the heart of the Labrador wilderness Prof. Benjamin Hooker of Cambridge, Massachusetts, gave an exultant shout, threw off his coat, and swarmed up the steel ladder leading to the landing stage.

He had ascended about halfway when a voice echoed among the girders. A red face was peering down at him over the edge of the platform.

"Hello!" said the face. "I'm all right, I guess."

Bennie gripped tight hold of the ladder, stiff with fear. He thought first of jumping down, changed his mind, and, shutting his eyes, continued automatically climbing up the ladder.

Then a hand gripped him under the arm and gave him a lift on to the level floor of the platform. He steadied himself and opened his eyes. Before him stood a man in blue overalls, under whose forehead, burned bright red by the Labrador sun, a pair of blue eyes looked out vaguely. The man appeared to be waiting for the visitor to make the next move. "Good morning," said Bennie, sparring for time. "Well"--he hesitated--"where were you when it happened?"

The man looked at him stupidly. "What?" he mumbled. "I--I don't seem to remember. You see--I was in--the condenser room building up the charge--for to-morrow--I mean to-day--sixty thousand volts at the terminals, and the fluid clearing up. I guess I looked out of the window a minute--to see--the fireworks--and then--somehow--I was out on the platform." He shaded his eyes and looked off down the valley at the half-shattered, wrecked tower. "The wind and the smoke!" he muttered. "The wind and the smoke!" he muttered. "The wind and the smoke!" he muttered. "The wind and the smoke! and the dust in my eyes--and now it's all gone to hell! But I guess everything's all right now, if you want to fly." He touched his cap automatically. "We can start whenever you are ready, sir. You see I thought you were gone, too! That would have been a mess! I'm sure you can handle the balancer without Perkins. Poor old Perk! And Hoskins--and the others. All gone, by God! All wiped out! Only me and you left, sir!" He laughed hysterically.

"Bats in his belfry!" thought Bennie. "Something hit him!"

Slowly it came over him that the half-stunned creature thought that he, Bennie Hooker, was Pax, the Master of the World!

He took the fellow by the arm. "Come on inside," he said. A plan had already formulated itself in his brain. Even as he was the man might be able to go through his customary duties in handling the Ring. It was not impossible. He had heard of such things, and the thought of the long marches over the frozen barrens and the perilous canoe trip down the coast, contrasted with a swift rush for an hour or two through the sunlit air, gave the professor the courage which might not have availed him otherwise. At the top of a short ladder a trapdoor opened inward, and Bennie found himself in a small compartment scarcely large enough to turn around in, from which a second door opened into the body of the Ring proper.

"It's all right--to-day," said the man hesitatingly. "I fixed--the air-lock--yesterday, sir. The leak--was here--at the hinge--but it's quite tight--now." He pointed at the door.

"Good," remarked Bennie. "I'll look around and see how things are."

This seemed to him to be eminently safe--and allowing for a program of investigation absolutely essential at the moment. Once he could master the secret of the Ring and be sure that the part of the fellow's brain which controlled the performance of his customary duties had not been injured by the shock of the night before, it might be possible to carry out the daring project which had suggested itself.

Passing through the inner door of the air-lock he entered the chart room of the Ring, followed stumblingly by his companion. It was warm and cozy; the first warmth Hooker had experienced for nearly a month. It made him feel faint, and he dropped into an armchair and pulled off his Glengarry. The survivor of the explosion, standing awkwardly at his side, fumbled with his cap. Ever and anon he rubbed his head.

Bennie sank back into the cushions and looked about him. On the opposite wall hung a map of the world on
Mercator’s Projection, and from a spot in Northern Labrador red lines radiated in all directions, which formed great curved loops, returning to the starting-point.

"The flights of the Ring," thought Bennie. "There's the one where they busted the Atlas Mountains," following with his eyes the crimson thread which ran diagonally across the Atlantic, traversed Spain and the Mediterranean, and circling in a narrow loop over the coast of Northern Africa turned back into its original track. Visions came to him of guiding the car for an afternoon jaunt across the Sahara, the gloomy forests of the Congo, into the Antarctic, and thence home in time for afternoon tea, via the Easter Islands, Hawaii, and Alaska. But why stop there? What was to prevent a trip to the moon? Or Mars? Or for that matter into the unknown realms outside the solar system—the fourth dimension, perhaps—or even the fifth dimension—

"Excuse me," said the machinist suddenly, "I just forgot—whether you take—cigars or cigarettes. You see I only acted as—table orderly—once—when Smith had that sprain." His hands moved uncertainly on the shelves, beyond the map. The heart of Professor Hooker leaped.

"Cigars!" he almost shouted.
The man found a box of Havanas and struck a match.
The bliss of it! And if there was tobacco there must be food and drink as well. He began to feel strangely exhilarated. But how to handle the man beside him? Pax would certainly never ask the questions that he wished to ask. He smoked rapidly, thinking hard. Of course he might pretend that he, too, had forgotten things. And at first this seemed to be the only way out of the difficulty. Then he had an inspiration.

"Look here," he remarked, rather severely. "Something's happened to you. You say you've forgotten what occurred yesterday? How do I know but you have forgotten everything you ever knew? You remember your name?"

"My name, sir?" The man laughed in a foolish fashion. "Why--of course I remember--my name. I wouldn't--be likely—to forget—that: Atterbury--I'm Atterbury--electrician of the Chimaera." And he drew himself up.

"That's all right," said Bennie, "but what were we doing yesterday? What is the very last thing that you can go back to?"

The man wrinkled his forehead. "The last thing? Why, sir, you told us you were going--to turn over the pole a bit--and freeze up Europe. I was up here--loading the condenser--when you cut me off from the alternator. I opened the switch--and put on the electrometer to see--if we had enough. Next--everything was clouded, and I went--over to the window to see--what was going on."

"Yes," commented Bennie approvingly, "all right so far. What happened then?"

"Why, after that, sir, after that, there was the Ray of course, and er--I don't seem to remember--oh, yes, a short circuit--and I ran--out on the platform--forgot all about the danger! After that, everything's confused. It's like a dream. Your coming up--the ladder--seemed--to wake me up." The machinist smiled sheepishly.

The plan was working well. Professor Hooker was learning things fast.

"Do you think that the two of us can fly the Chimaera south again?" he asked, inspecting the map.

"Why not?" answered Atterbury. "The balancer is working--better now--and doesn't take--much attention--and you can lay the course--and manage--the landing. I was going to put a fresh uranium cylinder in the tractor this morning--but I--forgot."

"There you go, forgetting again!" growled Bennie, realizing that his only excuse for asking questions hung on this fiction. And there were many, many more questions that he must ask before he would be able to fly. "You don't seem quite right in your coco this morning, Atterbury," he said. "I think we'll look things over a bit--the condenser first."

"Very well, sir." Atterbury turned and groped his way through a doorway, and they passed first into what appeared to be a storage-battery room. Huge glass tanks filled with amber-coloured fluid, in which numerous parallel plates were supported, lined the walls from floor to ceiling.

An ammeter on the wall caught Bennie's attention. "Weston Direct Reading A. C. Ammeter," he read on the dial. Alternate current! What were they doing with an alternating current in the storage-battery room? His eyes followed the wires along the wall. Yes, they ran to the terminals of the battery. It dawned upon him that there might be something here undreamed of in electrical engineering—a storage battery for an alternating current!

The electrician closed a row of switches, brought the two polished brass spheres of the discharger within striking distance, and instantly a blinding current of sparks roared between the terminals. He had been right. This battery not only was charged by an alternating current, but delivered one of high potential. He peered into the cells, racking his brain for an explanation.

"Atterbury," said he meditatively, "did I ever tell you why they do that?"

"Yes," answered the man. "You--told me--once. The two metals--in the electrolyte--come down--on the plates--in alternate films--as--the current changes direction. But you never told me--what the electrolyte was--I don't suppose--you--would be willing to now, would you?"
"H'm," said Bennie, "some time, maybe."

But this cue was all that he required. A clever scheme! Pax had formed layers of molecular thickness of two different metals in alternation by the to-and-fro swing of his charging current. When the battery discharged the metals went into solution, each plate becoming alternately positive and negative. He wondered what Pax had used for an electrolyte that enabled him to get a metallic deposit at each electrode. And he wondered also why the metals did not alloy. But it would not do for him to linger too long over a mere detail of equipment. And he turned away to continue his tour of inspection, a tour which occupied most of the morning, and during which he found a well-stocked gallery and made himself a cup of coffee.[5]

[Footnote 5: He even climbed with Atterbury to the very summit of the tractor, where he discovered that his original guess had been correct and that the car rose from the earth rocket fashion, due to the back pressure of the disintegrating ray from a massive cylinder of uranium contained in the tractor. Against this block played a small thermic inductor, the inner construction of which he was not able to determine, although it was obviously different from his own, and the coils were wound in a curious manner which he did not understand. There might be something in Hiroshito's theory after all. The cylinder of the tractor pointed directly downward so that the blast was discharged through the very centre of the Ring, but it could be swung through a small angle in any direction, and by means of this slight deflection the horizontal motion of the machine secured. Perhaps the most interesting feature of the mechanism was that the Ring appeared to have automatic stability, for the angle of the direction in which the tractor was pointed was controlled not only by a pair of gyroscopes which kept the Ring on an even keel, but also by a manometric valve causing it to fly at a fixed height above the earth's surface. Should it start to rise, the diminished pressure of the atmosphere operating on the valve swung the tractor more to one side, and the horizontal acceleration was thus increased at the expense of the vertical.]

But the more he learned about the mechanism of the Ring the greater became his misgivings about undertaking the return journey alone with Atterbury through the air. If they were to go, the start must be made within a few days, for the condenser held its charge but a comparatively short time, and its energy was necessary for starting the Ring. When freshly charged it supplied current for the thermic inductor for nearly three minutes, but the metallic films, deposited on the plates, dissolved slowly in the fluid, and after three or four days there remained only enough for a thirty-second run, hardly enough to lift the Ring from the earth. Once in the air, the downward blast from the tractor operated a turbo alternator mounted on a skeleton framework at the centre of the Ring, and the current supplied by this machine enabled the Ring to continue its flight indefinitely, or until the cylinder of uranium was completely disintegrated.

Yet to trek back over the route by which he had come appeared to be equally impossible. There was little likelihood that the two Indians would return; they were probably already thirty miles on their way back to the coast. If only he could get word to Thornton or some of those chaps at Washington they might send a relief expedition! But a ship would be weeks in getting to the coast, and how could he live in the meantime? There were provisions for only a few days in the Ring, and the storehouse in the valley had been wiped out of existence. Only an aeroplane could do the trick. And then he thought of Burke, his classmate--Burke who had devoted his life to heavier-than-air machines, and who, since his memorable flight across the Atlantic in the Stormy Petrol, had been a national hero. Burke could reach him in ten hours, but how could he reach Burke? In the heart of the frozen wilderness of Labrador he might as well be on another planet, as far as communication with the civilized world was concerned.

A burst of sunlight shot through the window and formed an oval patch on the floor at his feet. The weather was clear. He went out upon the platform. Patches of blue sky appeared overhead. As he gazed disconsolately across the valley toward the tower, his eye caught the glisten of something high in the air. From the top of the wreckage five thin shining lines ran parallel across the sky and disappeared in a small cloud which hung low over the face of the cliff.

"The antennae!" exclaimed Bennie. "A wireless to Burke." Burke would come; he knew Burke. A thousand miles overland was nothing to him. Hadn't he wagered five thousand dollars at the club that he would fly to the pole and bring back Peary's flag--with no takers? Why, Burke would take him home with as little trouble as a taxicab. And then, aghast, he remembered the complete destruction in the valley. The wireless plant had gone with the rest.

"The antennae, sir; the antennae!" announced Bennie.

"Can we get off a message to Washington?" he demanded. "The wires are still up, and we have the condenser."

"We might, sir, if it's not--a long one, though you've always said there was danger in running the engine with the car bolted down. We did it the time the big machine burnt out a coil. I can throw--a wire--over the antennae with a rocket--and join up--with the turbine machine. It will increase--our wave length, but they ought to pick us up."

"We'll try it, anyway," announced Bennie.

He inspected the chart and measured the distance in an airline from Boston to the point where the red lines converged. It was a trifle less than the distance between Boston and Chicago. Burke had done that in nine hours on
the trial trip of his trans-Atlantic monoplane. If the machine was in order and Burke started in the morning he would be with them by sunset, if he didn't get lost. But Bennie knew that Burke could drive his machine by dead reckoning and strike within a few leagues of a target a thousand miles away.

A muffled roar outside interrupted his musings, and running out on the platform again he found Atterbury attaching the cord of the aluminum ribbon, which the rocket had carried up and over the antennae, to one of the brush bars of the alternator.
"Nearly ready, sir," he said. "We'd best--lock the storm bolts--to hold her down--in case we have--to crowd on the power. We've got to use--pretty near the full lift--to get the alternator up--to the proper speed."

A chill ran down Bennie's spine. They were going to start the engine! In a moment he would be within twenty feet of a blast of disintegration products capable of lifting the whole machine into the air, and it was to be started at his command, after he had worked and pottered for two years with a thermic inductor the size of a thimble! He felt as he used to feel before taking a high dive, or as he imagined a soldier feels when about to go under fire for the first time. How would it turn out? Was he taking too much responsibility, and was Atterbury counting on him for the management of details? He felt singularly helpless as he reentered the chart room to compose his message.

He was joined by the electrician.
"I think--we are all--ready now," stammered the latter. "What will you send, sir?"
Bennie handed him a scrap of yellow paper, and Atterbury put on a pair of dark amber glasses, to protect his eyes from the light of the spark.

"Thornton, Naval Observatory, Washington:
Stranded fifty-four thirty-eight north, seventy-four eighteen west. Have the Ring machine. Ask Burke come immediately. Life and death matter.
B. HOOKER."

Atterbury read the message and then gazed blankly at Hooker.
"I--don't--understand," he said.
"Never mind, send it. I'll explain later." Together they went into the condenser room.

Atterbury mechanically pushed the brass balls in contact, shoved a bundle of iron wires halfway through the core of a great coil, and closed a switch. A humming sound filled the air, and a few seconds later a glow of yellow light came in through the window. A cone of luminous vapour was shooting downward through the centre of the Ring from the tractor. At first it was soft and nebulous, but it increased rapidly in brilliancy, and a dull roar, like that of a waterfall, added itself to the hum of the alternating current in the wires. And now a third sound came to his ears, the note of the turbine, low at first, but gradually rising like the scream of a siren, and the floor of the Ring beneath his feet throbbed with the vibration.

Bennie forgot the dynamometer, forgot his message to Burke, was conscious only that he had wakened a sleeping volcano. Then came the crack of the sparks, and the room seemed filled with the glare of the blue lightning, for Atterbury, with his telephones at his ears, staring through his yellow glasses, was sending out the call for the Naval Observatory.

"NAA--NAA--P--A--X."

Over and over again he sent the call, while in the meantime the condenser built up its charge from the overflow of current from the turbine generator. Then the electrician opened a switch, and the roar outside diminished and finally ceased.

"We can't listen--with the tractor running," he fretted. "The static--from the discharge--would tear--our detector--to pieces." He threw in the receiving instrument. For a few moments the telephones spoke only the whisperings of the arctic aurora, and then suddenly the faint cry of the answering spark was heard. Bennie watched the words as the electrician's pencil scrawled along on the paper.
"Waiting for you. Why don't you send? N.A.A."

"They must have--called us before--while the discharge--was running down," muttered Atterbury. "I think we can send--with the condenser--now."

He picked up the scrap of yellow paper, read it over, and threw out into space the message which he did not understand.

Two hours later came a second message:
"P--A--X. Burke starts at daybreak. Expects reach you by nine P. M. Asks you to show large beacon fire if possible.
"THORNTON, N. A. A."

"Hurrah!" cried Bennie. "Good for Burke! Atterbury, we're saved--saved, do you hear! Go to bed now and don't ask any questions. And say, before you go see if you can find me a glass of brandy."

* * * * *

It was decided that Burke must land on the plateau above the cliff, and here the material for the fire was collected. There was little enough of it and it was hard work carrying the oil up the steep trail. At times Bennie was almost in despair.

"It won't burn half an hour," said he, surveying the pile. "And we ought to be able to keep it going all night. There's plenty of stuff in the valley, but we can't have him come down there, with the tower, the antennæ, and all the rest of the mess."

"We might--show him--the big Ray," ventured Atterbury. "The thing--can be pointed up--and I can--keep the turbine running. You can start--the fire--as soon as you--hear his motors--and I'll shut down--as soon as I see your fire."

"Good idea!" agreed Bennie. "Only don't run continuously. Show the Ray for a minute every quarter of an hour, and on no account start up after you see the fire. If he thought the vertical beam was a searchlight and flew through it----" Bennie shuddered at the thought of Burke driving his aeroplane through the Ray that had shattered the Atlas Mountains.

So it was arranged. Half an hour after sunset Atterbury shut himself up in the Ring, and while Bennie climbed the trail leading to his post on the plateau, he heard the creaking of the great inductor as it slowly turned on its trunions.

It was pitch dark by the time he reached the pitifully small pile of brush which they had collected, and he poured some of the oil over it and sat down, drawing a blanket around his shoulders. He felt very much alone. Suppose the inductor failed to work? Suppose Atterbury turned the Ray on him? Suppose.... But his musings were shattered by a noise from the valley, a sound like that of escaping steam, and a moment later the Lavender Ray shot up toward the zenith. Bennie lay on his back and watched it, mindful of the night before the last when he had watched the Ray from the tower descending upon the cliff. He wondered if he should see any meteorites kindle in its path, but nothing appeared and the Ray died down, leaving everything in darkness again. Fifteen minutes passed and again the ghostly beam shot up into the night sky. Bennie looked at his watch. It was nearly half-past eight. The cold made him sleepy. He drew the blanket about him....

Two hours later through his half-dreams he caught the faint sound for which he had been listening. At first he was not sure. It might be the turbine alternator of the Ring running by its own inertia for some time after the discharge had ceased. But no, it was growing louder momentarily, and appeared to come from high up in the air. Now it died away to nothingness, and now it swelled in volume, and again died away. But at each subsequent recurrence it was louder than before. There was no longer any doubt. Burke was coming! It was time to start the brush pile. He lit match after match, only for the wind to blow them out. Yet all the time the machine in the air was coming nearer, the roar of its twin engines beating on the stillness of the Labrador night. In despair Bennie threw himself flat on his face by the brush pile and made a tent of the blanket, under which he at last succeeded in starting a blaze among the oil-soaked twigs. Then he pushed the half-empty keg into the fire, arose and stared up at the sky.

The machine was somewhere directly above him--just where he could not say. Presently the motors stopped. He shouted feebly, running up and down with his eyes turned skyward, and several times nearly fell into the fire. He wondered why it didn't appear. It seemed hours since the motors stopped! Then unexpectedly against the black background of the sky the great wings of the machine appeared, illuminated on their underside by the light of the fire. Silently it swung around on its descending spiral, instantly to be swallowed up in the darkness again, a moment later reappearing from the opposite direction, this time low down and headed straight for him. He jumped hastily to one side and fell flat. The machine grounded, rose once or twice as it ran along the ground, and came to a stop twenty yards from the fire. A man climbed out, slowly removed his goggles, and shook himself. Bennie scrambled to his feet and ran forward waving his hat.

"Well, Hooker!" remarked the man. "What th' hell are you doing here? You sure have some searchlight!"

* * * * *

How Hooker and Burke, under the guidance of Atterbury, who gradually regained his normal mental status, explored and charted the valley of the Ring is strictly no part of this tale which deals solely with the end of War upon the Earth. But next day, after several hours of excavation among the débris of the smelter, where Pax had extracted his uranium from the pitch blend mined at the cliff, they uncovered eight cylinders of the precious metal weighing about one hundred pounds apiece--the fuel of the Flying Ring. Now they were safe. Nay, more: universal space was theirs to traffic in.

Curious as to the reason why Pax had isolated himself in this frozen wilderness, they next examined the high
cliffs which shut in the valley on the west and against the almost perpendicular walls of which he had played the Lavender Ray. These cliffs proved, as Bennie had already suspected, to be a gigantic outcrop of pitchblende or black oxide of uranium. He estimated that nature had stored more uranium in but one of the abutments of this cliff than in all the known mines of the entire world. This radioactive mountain was the fulcrum by which this modern Archimedes had moved the earth. The vast amount of matter disintegrated by the Ray and thrown off into space with a velocity a thousandfold greater than the blast of a siege gun produced a back pressure or recoil against the face of the cliff, which thus became the "thrust block" of the force which had slowed down the period of the earth's rotation.

The day of the start dawned with a blazing sun. From the landing stage of the Ring Bennie could see stretching away to the east, west, and south, the interminable plains, dotted with firs, which had formed the natural barrier to the previous discovery of Pax's secret. Overhead the dome of the sky fitted the horizon like an enormous shell—a shell which, with a thrill, he realized that he could crack and escape from, like a fledgling ready for its first flight. And yet in this moment of triumph little Bennie Hooker felt the qualm which must inevitably come to those who take their lives in their hands. An hour and he would be either soaring Phoebus-like toward the south, or lying crushed and mangled within a tangled mass of wreckage. Even here in this desolate waste life seemed sweet, and he had much, so much to do. Wasn't it, after all, a crazy thing to try to navigate the complicated mechanism back to civilization? Yet something told him that unless he put his fate to the test now he would never return. He had the utmost confidence in Burke—he might never be able to secure his services again—no, it was now or never. He entered the air-lock, closing and bolting the door, and passed on into the chart room.

At all events, he thought, they were no worse off than Pax when he had made his first trial flight, and they were working with a proven machine, tuned to its fullest efficiency, and one which apparently possessed automatic stability. Atterbury had gone to the condenser room and was waiting for the order to start, while Burke was making the final adjustment of the gyroscopes which would put the Ring on its predetermined course. He came through the door and joined Bennie.

"Hooker," he said, "we're sure going to have some experience. If I can keep her from turning over, I think I can manage her. The trouble will come when we slant the tractor. I'm not sure how much depends on the atmospheric valve, and how much on me. Things may happen quickly. If we turn over we're done for."

He held out his hand to Bennie, who gripped it tremulously.

"Well," remarked the aviator, tossing away his cigarette, "we might as well die now as any time!"

He walked swiftly over to the speaking-tube which communicated with the condenser room and blew sharply into it.

"Let her go, Gallagher!" he directed.

"My God!" ejaculated Bennie. "Wait a second, can't you?"

But it was too late. He grabbed the rail, trembling. A humming sound filled the air, and the gyroscopes slowly began to revolve. He looked up through the window at the tractor, from which shot streaks of pale vapour with a noise like escaping steam. Somehow it seemed alive.

The Ring was throbbing as if it, too, was impregnated with life. The discharge of the tractor had risen to a muffled roar. Shaking all over, Bennie crossed to the inside window and looked across the inner space of the Ring. As yet the yellow glow of the discharge was scarcely visible, but the steel sides of the Ring danced and quivered, undulating in waves, and, as the intensity of the blast increased and the turbine commenced to revolve, everything outside went suddenly blurred and indistinct.

Dropping to his knees, Bennie looked down through the observation window in the floor. A blinding cloud of yellow dust was driving out and away from the base of the landing stage in the form of a gigantic ring. The earth at their feet was hidden in whirls of vapour; and ripples of light and shade chased each other outward in all directions, like shadows on the bottom of a sandy pond rippled by a breeze. It made him dizzy to look down there, and he arose from the window. Burke stood grimly at the control, unmindful of his associate. Bennie crossed to the other side, and as he passed the gyroscopes, the air from the swiftly spinning discs blew back his hair. He could see nothing through the tumult that roared down through the centre of the Ring, like a Niagara of hot steam shot through with a pale yellow phosphorescent light. The floor quivered under his feet, and ominous creaking and snapping sounds reverberated through the outer shell, as the steel girders of the landing stage were gradually relieved of its weight. Just as it seemed to him that everything was going to pieces, suddenly there was silence, save for the purr of the machinery, and Bennie felt his knees sink under him.

"We're off!" cried Burke. "Watch out!"

The floor swayed as the Ring, lifted by the tractor, swung to and fro like a pendulum. Bennie threw himself upon his stomach. The earth was dropping away from them like a stone. He felt a sickening sensation.

"Two thousand feet already," gasped Burke. "The atmospheric valve is set for five thousand. I'll make it ten! It
will give us more room to recover in--if anything--goes wrong!"

He gave the knob another half turn and laid his hand lightly on the lever which controlled the movements of the tractor. Bennie, flattened against the window, gazed below. The great dust ring showed indistinctly through a blue haze no longer directly beneath them, but a quarter of a mile to the north. Evidently they were not rising vertically.

The valley of the Ring looked like a black crack in a greenish-gray desert of rock and moss, the landing stage like a tiny bird's nest. The floor of the car moved slightly from side to side. Burke's face had gone gray, and he crouched unsteadily, one hand gripping a steel bracket on the wall.

"My Lord!" he mumbled with dry lips. "My Lord!"

Bennie, momentarily expecting annihilation, crawled on all fours to Burke's side.

The needle of the manometer indicated nine thousand five hundred feet, and was rapidly nearing the next division. Suddenly Burke felt the lever move slowly under his hand as though operated by some outside intelligence, and at the same moment the axis of one gyroscope swung slowly in a horizontal plane through an angle of nearly ninety degrees, while that of the other dipped slightly from the vertical. Both men had a ghastly feeling that the ghost of Pax had somehow returned and assumed control of the car. Bennie rotated the map under the gyroscope until the fine black line on the dial again lay across their destination. Then he crept back to his window again. The earth, far below and dimly visible, was sliding slowly northward, and the dust ring which marked their starting-point now lay as a flattened ellipse on the distant horizon. Beneath and behind them in their flight trailed a thin streak of pale bluish fog--the wake of the Flying Ring.

They were now searing the atmosphere at a height of nearly two miles, and the car was flying on a firm and even keel. There was no sound save the dull roar of the tractor and a slight humming from the vibration of the light steel cables. Bennie no longer felt any disagreeable sensation. A strange detachment possessed him. Dark forests, lakes, and a mighty river appeared to the south--the Moisie--and they followed it as a fishhawk might have done, until the wilderness broke away before them and they saw the broad reach of the St. Lawrence streaked with the smoke of ocean liners.

And then he lost control of himself for the first time and sobbed like a woman--not from fear, nor weariness, nor excitement, but for joy--the joy of the true scientist who has sought the truth and found it, has achieved that for mankind which but for him it would have lacked, perchance, forever. And he looked up at Burke and smiled.

The latter nodded.

"Yes," he remarked prosaically, "this is sure a little bit of all right! All to the good!"

EPILOGUE

Meanwhile, during the weeks that Hooker had been engaged in finding the valley of the Ring, unbelievable things had happened in world politics. In spite of the fact that Pax, having decreed the shifting of the Pole and the transformation of Central Europe into the Arctic zone, had refused further communication with mankind, all the nations--and none more zealously than the German Republic--had proceeded immediately to withdraw their armies within their own borders, and under the personal supervision of a General Commission to destroy all their armaments and munitions of war. The lyddite bombs, manufactured in vast quantities by the Krupps for the Relay Gun and all other high explosives, were used to demolish the fortresses upon every frontier of Europe. The contents of every arsenal was loaded upon barges and sunk in mid-Atlantic. And every form of military organization, rank, service, and even uniform, was abolished throughout the world.

A coalition of nations was formed under a single general government, known as the United States of Europe, which in cooperation with the United States of North and South America, of Asia, and of Africa, arranged for an annual world congress at The Hague, and which enforced its decrees by means of an International Police. In effect all the inhabitants of the globe came under a single control, as far as language and geographical boundaries would permit. Each state enforced local laws, but all were obedient to the higher law--the Law of Humanity--which was uniform through the earth. If an individual offended against the law of one nation, he was held to have offended against all, and was dealt with as such. The international police needed no treaties of extradition. The New York embezzler who fled to Nairobi was sent back as a matter of course without delay.

Any man was free to go and live where he chose, to manufacture, buy, and sell as he saw fit. And, because the fear and shadow of war were removed, the nations grew rich beyond the imagination of men; great hospitals and research laboratories, universities, schools, and kindergartens, opera houses, theatres, and gardens of every sort sprang up everywhere, paid for no one quite knew how. The nations ceased to build dreadnoughts, and instead used the money to send great troops of children with the teachers travelling over the world. It was against the law to own or manufacture any weapon that could be used to take human life. And because the nations had nothing to fear from one another, and because there were no scheming diplomats and bureaucrats to make a living out of imaginary antagonisms, people forgot that they were French or German or Russian or English, just as the people of the United States of America had long before practically disregarded the fact that they came from Ohio or Oregon or
Connecticut or Nevada. Russians with weak throats went to live in Italy as a matter of course, and Spaniards who liked German cooking settled in München.

All this, of course, did not happen at once, but came about quite naturally after the abolition of war. And after it had been done, everybody wondered why it had not been done ten centuries before; and people became so interested in destroying all the relics of that despicable employment, warfare, that they almost forgot that the Man Who Rocked the Earth had threatened that he would shift the axis of the globe. So that when the day fixed by him came and everything remained just as it always had been--and everybody still wore linen-mesh underwear in Strassburg and flannels in Archangel--nobody thought very much about it, or commented on the fact that the Flying Ring was no longer to be seen. And the only real difference was that you could take a P. & O. steamer at Marseilles and buy a through ticket to Tasili Ahaggar--if you wanted to go there--and that the shores of the Sahara became the Riviera of the world, crowded with health resorts and watering-places--so that Pax had not lived in vain, nor Thornton, nor Bill Hood, nor Bennie Hooker, nor any of them.

The whole thing is a matter of record, as it should be. The deliberations of Conference No. 2 broke up in a hubbub, just as Von Helmuth and Von Koenitz had intended, and the transcripts of their discussions proved to be of the slightest scientific value. But in the files of the old War Department--now called the Department for the Alleviation of Poverty and Human Suffering--can be read the messages interchanged between The Dictator of Human Destiny and the President of the United States, together with all the reports and observations relating thereto, including Professor Hooker's Report to the Smithsonian Institute of his journey to the valley of the Ring and what he found there. Only the secret of the Ring--of thermic induction and atomic disintegration--in short, of the Lavender Ray, is his by right of discovery, or treasure trove, or what you will, and so is his patent on Hooker's Space-Navigating Car, in which he afterward explored the solar system and the uttermost regions of the sidereal ether. But that shall be told hereafter.

THE END
Howard Frayberg, Production Director of Know Your Universe!, was a man of sudden unpredictable moods; and Sam Catlin, the show's Continuity Editor, had learned to expect the worst.

"Sam," said Frayberg, "regarding the show last night...." He paused to seek the proper words, and Catlin relaxed. Frayberg's frame of mind was merely critical. "Sam, we're in a rut. What's worse, the show's dull!"

Sam Catlin shrugged, not committing himself.

"Seaweed Processors of Alphard IX--who cares about seaweed?"

"It's factual stuff," said Sam, defensive but not wanting to go too far out on a limb. "We bring 'em everything--color, fact, romance, sight, sound, smell.... Next week, it's the Ball Expedition to the Mixtup Mountains on Gropus."

Frayberg leaned forward. "Sam, we're working the wrong slant on this stuff.... We've got to loosen up, sock 'em! Shift our ground! Give 'em the old human angle--glamor, mystery, thrills!"

Sam Catlin curled his lips. "I got just what you want."

"Yeah? Show me."

Catlin reached into his waste basket. "I filed this just ten minutes ago...." He smoothed out the pages.

"Sequence idea, by Wilbur Murphy. Investigate "Horseman of Space," the man who rides up to meet incoming space-ships."

Frayberg tilted his head to the side. "Rides up on a horse?"

"That's what Wilbur Murphy says."

"How far up?"

"Does it make any difference?"

"No--I guess not."

"Well, for your information, it's up ten thousand, twenty thousand miles. He waves to the pilot, takes off his hat to the passengers, then rides back down."

"And where does all this take place?"

"On--on--" Catlin frowned. "I can write it, but I can't pronounce it." He printed on his scratch-screen: CIRGAMESÇ.

"Sirgamesk," read Frayberg.

Catlin shook his head. "That's what it looks like--but those consonants are all aspirated gutturals. It's more like 'Hrrghameshgrrrh'."

"Where did Murphy get this tip?"

"I didn't bother to ask."

"Well," mused Frayberg, "we could always do a show on strange superstitions. Is Murphy around?"

"He's explaining his expense account to Shifkin."

"Get him in here; let's talk to him."

Wilbur Murphy had a blond crew-cut, a broad freckled nose, and a serious sidelong squint. He looked from his crumpled sequence idea to Catlin and Frayberg. "Didn't like it, eh?"

"We thought the emphasis should be a little different," explained Catlin. "Instead of 'The Space Horseman,' we'd give it the working title, 'Odd Superstitions of Hrrghameshgrrrh.'"

"Oh, hell!" said Frayberg. "Call it Sirgamesk."

"Anyway," said Catlin, "that's the angle."

"But it's not superstition," said Murphy.

"Oh, come, Wilbur ...

"I got this for sheer sober-sided fact. A man rides a horse up to meet the incoming ships!"

"Where did you get this wild fable?"

"My brother-in-law is purser on the Celestial Traveller. At Riker's Planet they make connection with the feeder line out of Cirgamesç."

"Wait a minute," said Catlin. "How did you pronounce that?"

"Cirgamesç. The steward on the shuttle-ship gave out this story, and my brother-in-law passed it along to me."

"Somebody's pulling somebody's leg."

"My brother-in-law wasn't, and the steward was cold sober."
"They've been eating bhang. Sirgamesk is a Javanese planet, isn't it?"
"Javanese, Arab, Malay."
"Then they took a bhang supply with them, and hashish, chat, and a few other sociable herbs."
"Well, this horseman isn't any drug-dream."
"No? What is it?"
"So far as I know it's a man on a horse."
"Ten thousand miles up? In a vacuum?"
"Exactly."
"No space-suit?"
"That's the story."
Catlin and Frayberg looked at each other.
"Well, Wilbur," Catlin began.
Frayberg interrupted. "What we can use, Wilbur, is a sequence on Sirgamesk superstition. Emphasis on voodoo or witchcraft--naked girls dancing--stuff with roots in Earth, but now typically Sirgamesk. Lots of color. Secret rite stuff...."
"Not much room on Cirgamesç for secret rites."
"It's a big planet, isn't it?"
"Not quite as big as Mars. There's no atmosphere. The settlers live in mountain valleys, with air-tight lids over 'em."
Catlin flipped the pages of Thumbnail Sketches of the Inhabited Worlds. "Says here there's ancient ruins millions of years old. When the atmosphere went, the population went with it."
Frayberg became animated. "There's lots of material out there! Go get it, Wilbur! Life! Sex! Excitement! Mystery!"
"Okay," said Wilbur Murphy.
"But lay off this horseman-in-space. There is a limit to public credulity, and don't you let anyone tell you different."

* * * * *
Cirgamesç hung outside the port, twenty thousand miles ahead. The steward leaned over Wilbur Murphy's shoulder and pointed a long brown finger. "It was right out there, sir. He came riding up--"
"What kind of a man was it? Strange-looking?"
"No. He was Cirgameski."
"Oh. You saw him with your own eyes, eh?"
The steward bowed, and his loose white mantle fell forward. "Exactly, sir."
"No helmet, no space-suit?"
"He wore a short Singhalût vest and pantaloons and a yellow Hadrasi hat. No more."
"And the horse?"
"Ah, the horse! There's a different matter."
"Different how?"
"I can't describe the horse. I was intent on the man."
"Did you recognize him?"
"By the brow of Lord Allah, it's well not to look too closely when such matters occur."
"Then--you did recognize him!"
"I must be at my task, sir."
Murphy frowned in vexation at the steward's retreating back, then bent over his camera to check the tape-feed. If anything appeared now, and his eyes could see it, the two-hundred million audience of Know Your Universe! could see it with him.
When he looked up, Murphy made a frantic grab for the stanchion, then relaxed. Cirgamesç had taken the Great Twitch. It was an illusion, a psychological quirk. One instant the planet lay ahead; then a man winked or turned away, and when he looked back, "ahead" had become "below"; the planet had swung an astonishing ninety degrees across the sky, and they were falling!
Murphy leaned against the stanchion. "The Great Twitch!," he muttered to himself, "I'd like to get that on two hundred million screens!"
Several hours passed. Cirgamesç grew. The Sampan Range rose up like a dark scab; the valley sultanates of Singhalût, Hadra, New Batavia, and Boeng-Bohôt showed like glistening chicken-tracks; the Great Rift Colony of Sundaman stretched down through the foothills like the trail of a slug.
A loudspeaker voice rattled the ship. "Attention passengers for Singhalût and other points on Cirgamesç!
Kindly prepare your luggage for disembarkation. Customs at Singhalût are extremely thorough. Passengers are warned to take no weapons, drugs or explosives ashore. This is important!

* * * * *

The warning turned out to be an understatement. Murphy was plied with questions. He suffered search of an intimate nature. He was three-dimensionally X-rayed with a range of frequencies calculated to excite fluorescence in whatever object he might have secreted in his stomach, in a hollow bone, or under a layer of flesh.

His luggage was explored with similar minute attention, and Murphy rescued his cameras with difficulty.

"What're you so damn anxious about? I don't have drugs; I don't have contraband ..."

"It's guns, your excellency. Guns, weapons, explosives ..."

"I don't have any guns."

"But these objects here?"

"They're cameras. They record pictures and sounds and smells."

The inspector seized the cases with a glittering smile of triumph. "They resemble no cameras of my experience; I fear I shall have to impound ..."

A young man in loose white pantaloons, a pink vest, pale green cravat and a complex black turban strolled up. The inspector made a swift obeisance, with arms spread wide. "Excellency."

The young man raised two fingers. "You may find it possible to spare Mr. Murphy any unnecessary formality."

"As your Excellency recommends...." The inspector nimbly repacked Murphy's belongings, while the young man looked on benignly.

Murphy covertly inspected his face. The skin was smooth, the color of the rising moon; the eyes were narrow, dark, superficially placid. The effect was of silken punctilio with hot ruby blood close beneath.

Satisfied with the inspector's zeal, he turned to Murphy. "Allow me to introduce myself, Tuan Murphy. I am Ali-Tomás, of the House of Singhalût, and my father the Sultan begs you to accept our poor hospitality."

"Why, thank you," said Murphy. "This is a very pleasant surprise."

"If you will allow me to conduct you...." He turned to the inspector. "Mr. Murphy's luggage to the palace."

* * * * *

Murphy accompanied Ali-Tomás into the outside light, fitting his own quick step to the prince's feline saunter. This is coming it pretty soft, he said to himself. I'll have a magnificent suite, with bowls of fruit and gin pahits, not to mention two or three silken girls with skin like rich cream bringing me towels in the shower.... Well, well, well, it's not so bad working for Know Your Universe! after all! I suppose I ought to unlimber my camera....

Prince Ali-Tomás watched him with interest. "And what is the audience of Know Your Universe!?"

"We call 'em 'participants'."

"Expressive. And how many participants do you serve?"

"Oh, the Bowdler Index rises and falls. We've got about two hundred million screens, with five hundred million participants."

"Fascinating! And tell me--how do you record smells?"

Murphy displayed the odor recorder on the side of the camera, with its gelatinous track which fixed the molecular design.

"And the odors recreated--they are like the originals?"

"Pretty close. Never exact, but none of the participants knows the difference. Sometimes the synthetic odor is an improvement."

"Astounding!" murmured the prince.

"And sometimes ... Well, Carson Tenlake went out to get the myrrh-blossoms on Venus. It was a hot day--as days usually are on Venus--and a long climb. When the show was run off, there was more smell of Carson than of flowers."

Prince Ali-Tomás laughed politely. "We turn through here."

They came out into a compound paved with red, green and white tiles. Beneath the valley roof was a sinuous trough, full of haze and warmth and golden light. As far in either direction as the eye could reach, the hillsides were terraced, barred in various shades of green. Spattering the valley floor were tall canvas pavilions, tents, booths, shelters.

"Naturally," said Prince Ali-Tomás, "we hope that you and your participants will enjoy Singhalût. It is a truism that, in order to import, we must export; we wish to encourage a pleasurable response to the 'Made in Singhalût' tag on our batiks, carvings, lacquers."

They rolled quietly across the square in a surface-car displaying the House emblem. Murphy rested against deep, cool cushions. "Your inspectors are pretty careful about weapons."

Ali-Tomás smiled complacently. "Our existence is ordered and peaceful. You may be familiar with the concept..."
of adak?"

"I don't think so."

"A word, an idea from old Earth. Every living act is ordered by ritual. But our heritage is passionate--and when unyielding adak stands in the way of an irresistible emotion, there is turbulence, sometimes even killing."

"An amok."

"Exactly. It is as well that the amok has no weapons other than his knife. Otherwise he would kill twenty where now he kills one."

The car rolled along a narrow avenue, scattering pedestrians to either side like the bow of a boat spreading foam. The men wore loose white pantaloons and a short open vest; the women wore only the pantaloons.

"Handsome set of people," remarked Murphy.

Ali-Tomás again smiled complacently. "I'm sure Singhalût will present an inspiring and beautiful spectacle for your program."

Murphy remembered the keynote to Howard Frayberg's instructions: "Excitement! Sex! Mystery!" Frayberg cared little for inspiration or beauty. "I imagine," he said casually, "that you celebrate a number of interesting festivals? Colorful dancing? Unique customs?"

Ali-Tomás shook his head. "To the contrary. We left our superstitions and ancestor-worship back on Earth. We are quiet Mohammedans and indulge in very little festivity. Perhaps here is the reason for amoks and sjambaks."

"Sjambaks?"

"We are not proud of them. You will hear sly rumor, and it is better that I arm you beforehand with truth."

"What is a sjambak?"

"They are bandits, flouters of authority. I will show you one presently."

"I heard," said Murphy, "of a man riding a horse up to meet the space-ships. What would account for a story like that?"

"It can have no possible basis," said Prince Ali-Tomás. "We have no horses on Cirgamesç. None whatever."

"But ..."

"The veriest idle talk. Such nonsense will have no interest for your intelligent participants."

The car rolled into a square a hundred yards on a side, lined with luxuriant banana palms. Opposite was an enormous pavilion of gold and violet silk, with a dozen peaked gables casting various changing sheens. In the center of the square a twenty-foot pole supported a cage about two feet wide, three feet long, and four feet high. Inside this cage crouched a naked man.

"That," said Ali-Tomás, "is a sjambak. As you see," a faint note of apology entered his voice, "we attempt to discourage them."

"What's that metal object on his chest?"

"The mark of his trade. By that you may know all sjambak. In these unsettled times only we of the House may cover our chests--all others must show themselves and declare themselves true Singhalûsi."

Murphy said tentatively, "I must come back here and photograph that cage."

Ali-Tomás smilingly shook his head. "I will show you our farms, our vines and orchards. Your participants will enjoy these; they have no interest in the dolor of an ignoble sjambak."

"Well," said Murphy, "our aim is a well-rounded production. We want to show the farmers at work, the members of the great House at their responsibilities, as well as the deserved fate of wrongdoers."

"Exactly. For every sjambak there are ten thousand industrious Singhâlûsi. It follows then that only one tenthousandth part of your film should be devoted to this infamous minority."

"About three-tenths of a second, eh?"

"No more than they deserve."

"You don't know my Production Director. His name is Howard Frayberg, and ..."

* * * * *

Howard Frayberg was deep in conference with Sam Catlin, under the influence of what Catlin called his philosophic kick. It was the phase which Catlin feared most.

"Sam," said Frayberg, "do you know the danger of this business?"

"Ulcers," said Catlin promptly.

"Ulcers," said Catlin. "You don't know my Production Director. His name is Howard Frayberg, and ..."

"Speak for yourself," said Catlin.

"Consider. We sit in this office. We think we know what kind of show we want. We send out our staff to get it. We're signing the checks, so back it comes the way we asked for it. We look at it, hear it, smell it--and pretty soon we believe it: our version of the universe, full-blown from our brains like Minerva stepping out of Zeus. You see
"what I mean?"

"I understand the words."

"We've got our own picture of what's going on. We ask for it, we get it. It builds up and up--and finally we're like mice in a trap built of our own ideas. We cannibalize our own brains."

"Nobody'll ever accuse you of being stingy with a metaphor."

"Sam, let's have the truth. How many times have you been off Earth?"

"I went to Mars once. And I spent a couple of weeks at Aristillus Resort on the Moon."

Frayberg leaned back in his chair as if shocked. "And we're supposed to be a couple of learned planetologists!"

Catlin made grumbling noises in his throat. "I haven't been around the zodiac, so what? You sneezed a few minutes ago and I said gesundheit, but I don't have any doctor's degree."

"There comes a time in a man's life," said Frayberg, "when he wants to take stock, get a new perspective."

"Relax, Howard, relax."

"In our case it means taking out our preconceived ideas, looking at them, checking our illusions against reality."

"Are you serious about this?"

"Another thing," said Frayberg, "I want to check up a little. Shifkin says the expense accounts are frightful. But he can't fight it. When Keeler says he paid ten munits for a loaf of bread on Nekkar IV, who's gonna call him on it?"

"Hell, let him eat bread! That's cheaper than making a safari around the cluster, spot-checking the supermarkets."

Frayberg paid no heed. He touched a button; a three-foot sphere full of glistening motes appeared. Earth was at the center, with thin red lines, the scheduled space-ship routes, radiating out in all directions.

"Let's see what kind of circle we can make," said Frayberg. "Gower's here at Canopus, Keeler's over here at Blue Moon, Wilbur Murphy's at Sirgamesk ..."

"Don't forget," muttered Catlin, "we got a show to put on."

"We've got material for a year," scoffed Frayberg. "Get hold of Space-Lines. We'll start with Sirgamesk, and see what Wilbur Murphy's up to."

---

Wilbur Murphy was being presented to the Sultan of Singhalût by the Prince Ali-Tomás. The Sultan, a small mild man of seventy, sat cross-legged on an enormous pink and green air-cushion. "Be at your ease, Mr. Murphy. We dispense with as much protocol here as practicable." The Sultan had a dry clipped voice and the air of a rather harassed corporation executive. "I understand you represent Earth-Central Home Screen Network?"

"I'm a staff photographer for the Know Your Universe! show."

"We export a great deal to Earth," mused the Sultan, "but not as much as we'd like. We're very pleased with your interest in us, and naturally we want to help you in every way possible. Tomorrow the Keeper of the Archives will present a series of charts analyzing our economy. Ali-Tomás shall personally conduct you through the fish-hatcheries. We want you to know we're doing a great job out here on Singhalût."

"I'm sure you are," said Murphy uncomfortably. "However, that isn't quite the stuff I want."

"No? Just where do your desires lie?"

Ali-Tomás said delicately. "Mr. Murphy took a rather profound interest in the sjambak displayed in the square."

"Oh. And you explained that these renegades could hold no interest for serious students of our planet?"

Murphy started to explain that clustered around two hundred million screens tuned to Know Your Universe! were four or five hundred million participants, the greater part of them neither serious nor students. The Sultan cut in decisively. "I will now impart something truly interesting. We Singhalûsi are making preparations to reclaim four more valleys, with an added area of six hundred thousand acres! I shall put my physiographic models at your disposal; you may use them to the fullest extent!"

"I'll be pleased for the opportunity," declared Murphy. "But tomorrow I'd like to prowl around the valley, meet your people, observe their customs, religious rites, courtships, funerals ..."

The Sultan pulled a sour face. "We are ditch-water dull. Festivals are celebrated quietly in the home; there is small religious fervor; courtships are consummated by family contract. I fear you will find little sensational material here in Singhalût."

"You have no temple dances?" asked Murphy. "No fire-walkers, snake-charmers--voodoo?"

The Sultan smiled patronizingly. "We came out here to Cirgamesç to escape the ancient superstitions. Our lives are calm, orderly. Even the amoks have practically disappeared."

"But the sjambaks--"

"Negligible."

"Well," said Murphy, "I'd like to visit some of these ancient cities."

"I advise against it," declared the Sultan. "They are shards, weathered stone. There are no inscriptions, no art.
There is no stimulation in dead stone. Now. Tomorrow I will hear a report on hybrid soybean plantings in the Upper Kam District. You will want to be present."

* * * * *

Murphy's suite matched or even excelled his expectation. He had four rooms and a private garden enclosed by a thicket of bamboo. His bathroom walls were slabs of glossy actinolite, inlaid with cinnabar, jade, galena, pyrite and blue malachite, in representations of fantastic birds. His bedroom was a tent thirty feet high. Two walls were dark green fabric; a third was golden rust; the fourth opened upon the private garden.

Murphy's bed was a pink and yellow creation ten feet square, soft as cobweb, smelling of rose sandalwood. Carved black lacquer tubs held fruit; two dozen wines, liquors, syrups, essences flowed at a touch from as many ebony spigots.

The garden centered on a pool of cool water, very pleasant in the hothouse climate of Singhalût. The only shortcoming was the lack of the lovely young servitors Murphy had envisioned. He took it upon himself to repair this lack, and in a shady wine-house behind the palace, called the Barangipan, he made the acquaintance of a girl-musician named Soek Panjoebang. He found her enticing tones of quavering sweetness from the gamelan, an instrument well-loved in Old Bali. Soek Panjoebang had the delicate features and transparent skin of Sumatra, the supple long limbs of Arabia and in a pair of wide and golden eyes a heritage from somewhere in Celtic Europe. Murphy bought her a goblet of frozen shavings, each a different perfume, while he himself drank white rice-beer. Soek Panjoebang displayed an intense interest in the ways of Earth, and Murphy found it hard to guide the conversation. "Weelbrrr," she said. "Such a funny name, Weelbrrr. Do you think I could play the gamelan in the great cities, the great palaces of Earth?"

"Sure. There's no law against gamelans."
"You talk so funny, Weelbrrr. I like to hear you talk."
"I suppose you get kinda bored here in Singhalût?"

She shrugged. "Life is pleasant, but it concerns with little things. We have no great adventures. We grow flowers, we play the gamelan." She eyed him archly sidelong. "We love.... We sleep...."

Murphy grinned. "You run amok."
"No, no, no. That is no more."
"Not since the sjambaks, eh?"

"The sjambaks are bad. But better than amok. When a man feels the knot forming around his chest, he no longer takes his kris and runs down the street--he becomes sjambak."

This was getting interesting. "Where does he go? What does he do?"
"He robs."
"Who does he rob? What does he do with his loot?"
She leaned toward him. "It is not well to talk of them."
"Why not?"
"The Sultan does not wish it. Everywhere are listeners. When one talks sjambak, the Sultan's ears rise, like the points on a cat."

"Suppose they do--what's the difference? I've got a legitimate interest. I saw one of them in that cage out there. That's torture. I want to know about it."

"He is very bad. He opened the monorail car and the air rushed out. Forty-two Singhalûsi and Hadrasi bloated and blew up."

"And what happened to the sjambak?"
"He took all the gold and money and jewels and ran away."
"Ran where?"
"Out across Great Pharasang Plain. But he was a fool. He came back to Singhalût for his wife; he was caught and set up for all people to look at, so they might tell each other, 'thus it is for sjambaks.'"

"Where do the sjambaks hide out?"
"Oh," she looked vaguely around the room, "out on the plains. In the mountains."
"They must have some shelter--an air-dome."
"No. The Sultan would send out his patrol-boat and destroy them. They roam quietly. They hide among the rocks and tend their oxygen stills. Sometimes they visit the old cities."

"I wonder," said Murphy, staring into his beer, "could it be sjambaks who ride horses up to meet the spaceship?"

Soek Panjoebang knit her black eyebrows, as if preoccupied.
"That's what brought me out here," Murphy went on. "This story of a man riding a horse out in space."
"Ridiculous; we have no horses in Cirgamesç."
"All right, the steward won't swear to the horse. Suppose the man was up there on foot or riding a bicycle. But the steward recognized the man."

"Who was this man, pray?"

"The steward clammed up.... The name would have been just noise to me, anyway."

"I might recognize the name...."

"Ask him yourself. The ship's still out at the field."

She shook her head slowly, holding her golden eyes on his face. "I do not care to attract the attention of either steward, sjambak--or Sultan."

Murphy said impatiently. "In any event, it's not who--but how. How does the man breathe? Vacuum sucks a man's lungs up out of his mouth, bursts his stomach, his ears...."

"We have excellent doctors," said Soek Panjoebang shuddering, "but alas! I am not one of them."

Murphy looked at her sharply. Her voice held the plangent sweetness of her instrument, with additional overtones of mockery. "There must be some kind of invisible dome around him, holding in air," said Murphy.

"And what if there is?"

"It's something new, and if it is, I want to find out about it."

Soek smiled languidly. "You are so typical an old-lander--worried, frowning, dynamic. You should relax, cultivate napaû, enjoy life as we do here in Singhalût."

"What's napaû?"

"It's our philosophy, where we find meaning and life and beauty in every aspect of the world."

"That sjambak in the cage could do with a little less napaû right now."

"No doubt he is unhappy," she agreed.

"Unhappy! He's being tortured!"

"He broke the Sultan's law. His life is no longer his own. It belongs to Singhalût. If the Sultan wishes to use it to warn other wrongdoers, the fact that the man suffers is of small interest."

"If they all wear that metal ornament, how can they hope to hide out?" He glanced at her own bare bosom.

"They appear by night--slip through the streets like ghosts...." She looked in turn at Murphy's loose shirt. "You will notice persons brushing up against you, feeling you," she laid her hand along his breast, "and when this happens you will know they are agents of the Sultan, because only strangers and the House may wear shirts. But now, let me sing to you--a song from the Old Land, old Java. You will not understand the tongue, but no other words so join the voice of the gamelan."

"This is the gravy-train," said Murphy. "Instead of a garden suite with a private pool, I usually sleep in a bubble-tent, with nothing to eat but condensed food."

Soek Panjoebang flung the water out of her sleek black hair. "Perhaps, Weelbrrr, you will regret leaving Cirgamesç?"

"Well," he looked up to the transparent roof, barely visible where the sunlight collected and refracted, "I don't particularly like being shut up like a bird in an aviary.... Mildly claustrophobic, I guess."

After breakfast, drinking thick coffee from tiny silver cups, Murphy looked long and reflectively at Soek Panjoebang.

"What are you thinking, Weelbrrr?"

Murphy drained his coffee. "I'm thinking that I'd better be getting to work."

"And what do you do?"

"First I'm going to shoot the palace, and you sitting here in the garden playing your gamelan."

"But Weelbrrr--not me!"

"You're a part of the universe, rather an interesting part. Then I'll take the square...."

"And the sjambak?"

A quiet voice spoke from behind. "A visitor, Tuan Murphy."

Murphy turned his head. "Bring him in." He looked back to Soek Panjoebang. She was on her feet.

"It is necessary that I go."

"When will I see you?"

"Tonight--at the Barangipan."

The quiet voice said, "Mr. Rube Trimmer, Tuan."

Trimmer was small and middle-aged, with thin shoulders and a paunch. He carried himself with a hell-raising swagger, left over from a time twenty years gone. His skin had the waxy look of lost floridity, his tuft of white hair
was coarse and thin, his eyelids hung in the off-side droop that amateur physiognomists like to associate with guile.

"I'm Resident Director of the Import-Export Bank," said Trimmer. "Heard you were here and thought I'd pay my respects."

"I suppose you don't see many strangers."

"Not too many--there's nothing much to bring 'em. Cigramesç isn't a comfortable tourist planet. Too confined, shut in. A man with a sensitive psyche goes nuts pretty easy here."

"Yeah," said Murphy. "I was thinking the same thing this morning. That dome begins to give a man the willies. How do the natives stand it? Or do they?"

Trimmer pulled out a cigar case. Murphy refused the offer.

"Local tobacco," said Trimmer. "Very good." He lit up thoughtfully. "Well, you might say that the Cigrameski are schizophrenic. They've got the docile Javanese blood, plus the Arabian élan. The Javanese part is on top, but every once in a while you see a flash of arrogance.... You never know. I've been out here nine years and I'm still a stranger." He puffed on his cigar, studied Murphy with his careful eyes. "You work for Know Your Universe!, I hear."

"Yeah. I'm one of the leg men."

"Must be a great job."

"A man sees a lot of the galaxy, and he runs into queer tales, like this sjambak stuff."

Trimmer nodded without surprise. "My advice to you, Murphy, is lay off the sjambaks. They're not healthy around here."

Murphy was startled by the bluntness. "What's the big mystery about these sjambaks?"

Trimmer looked around the room. "This place is bugged."

"I found two pick-ups and plugged 'em," said Murphy.

Trimmer laughed. "Those were just plants. They hide 'em where a man might just barely spot 'em. You can't catch the real ones. They're woven into the cloth--pressure-sensitive wires."

Murphy looked critically at the cloth walls.

"Don't let it worry you," said Trimmer. "They listen more out of habit than anything else. If you're fussy we'll go for a walk."

The road led past the palace into the country. Murphy and Trimmer sauntered along a placid river, overgrown with lily pads, swarming with large white ducks.

"This sjambak business," said Murphy. "Everybody talks around it. You can't pin anybody down."

"Including me," said Trimmer. "I'm more or less privileged around here. The Sultan finances his reclamation through the bank, on the basis of my reports. But there's more to Singhalût than the Sultan."

"Namely?"

Trimmer waved his cigar waggishly. "Now we're getting in where I don't like to talk. I'll give you a hint. Prince Ali thinks roofing-in more valleys is a waste of money, when there's Hadra and New Batavia and Sundaman so close."

"You mean--armed conquest?"

Trimmer laughed. "You said it, not me."

"They can't carry on much of a war--unless the soldiers commute by monorail."

"Maybe Prince Ali thinks he's got the answer."

"Sjambaks?"

"I didn't say it," said Trimmer blandly.

Murphy grinned. After a moment he said. "I picked up with a girl named Soek Panjoebang who plays the gamelan. I suppose she's working for either the Sultan or Prince Ali. Do you know which?"

Trimmer's eyes sparkled. He shook his head. "Might be either one. There's a way to find out."

"Yeah?"

"Get her off where you're sure there's no spy-cells. Tell her two things--one for Ali, the other for the Sultan. Whichever one reacts you know you've got her tagged."

"For instance?"

"Well, for instance she learns that you can rig up a hypnotic ray from a flashlight battery, a piece of bamboo, and a few lengths of wire. That'll get Ali in an awful sweat. He can't get weapons. None at all. And for the Sultan," Trimmer was warming up to his intrigue, chewing on his cigar with gusto, "tell her you're on to a catalyst that turns clay into aluminum and oxygen in the presence of sunlight. The Sultan would sell his right leg for something like that. He tries hard for Singhalût and Cigramesç."

"And Ali?"

Trimmer hesitated. "I never said what I'm gonna say. Don't forget--I never said it."
"Okay, you never said it."
"Ever hear of a jehad?"
"Mohammedan holy wars."
"Believe it or not, Ali wants a jehad."
"Sounds kinda fantastic."
"Sure it's fantastic. Don't forget, I never said anything about it. But suppose someone--strictly unofficial, of course--let the idea percolate around the Peace Office back home."
"Ah," said Murphy. "That's why you came to see me."

* * * * *

Trimmer turned a look of injured innocence. "Now, Murphy, you're a little unfair. I'm a friendly guy. Of course I don't like to see the bank lose what we've got tied up in the Sultan."

"Why don't you send in a report yourself?"
"I have! But when they hear the same thing from you, a Know Your Universe! man, they might make a move." Murphy nodded.

"Well, we understand each other," said Trimmer heartily, "and everything's clear."

"Not entirely. How's Ali going to launch a jehad when he doesn't have any weapons, no warships, no supplies?"

"Now," said Trimmer, "we're getting into the realm of supposition." He paused, looked behind him. A farmer pushing a rotary tiller, bowed politely, trundled ahead. Behind was a young man in a black turban, gold earrings, a black and red vest, white pantaloons, black curl-toed slippers. He bowed, started past. Trimmer held up his hand.

"Don't waste your time up there; we're going back in a few minutes."

"Thank you, Tuan."

"Who are you reporting to? The Sultan or Prince Ali?"

"The Tuan is sure to pierce the veil of my evasions. I shall not dissemble. I am the Sultan's man."

Trimmer nodded. "Now, if you'll kindly remove to about a hundred yards, where your whisper pick-up won't work."

"By your leave, I go." He retreated without haste.

"He's almost certainly working for Ali," said Trimmer.

"Not a very subtle lie."

"Oh, yes--third level. He figured I'd take it second level."

"How's that again?"

"Naturally I wouldn't believe him. He knew I knew that he knew it. So when he said 'Sultan', I'd think he wouldn't lie simply, but that he'd lie double--that he actually was working for the Sultan."

Murphy laughed. "Suppose he told you a fourth-level lie?"

"It starts to be a toss-up pretty soon," Trimmer admitted. "I don't think he gives me credit for that much subtlety.... What are you doing the rest of the day?"

"Taking footage. Do you know where I can find some picturesque rites? Mystical dances, human sacrifice? I've got to work up some glamor and exotic lore."

"There's this sjambak in the cage. That's about as close to the medieval as you'll find anywhere in Earth Commonwealth."

"Speaking of sjambaks ..."

"No time," said Trimmer. "Got to get back. Drop in at my office--right down the square from the palace."

* * * * *

Murphy returned to his suite. The shadowy figure of his room servant said, "His Highness the Sultan desires the Tuan's attendance in the Cascade Garden."

"Thank you," said Murphy. "As soon as I load my camera."

The Cascade Room was an open patio in front of an artificial waterfall. The Sultan was pacing back and forth, wearing dusty khaki puttees, brown plastic boots, a yellow polo shirt. He carried a twig which he used as a riding crop, slapping his boots as he walked. He turned his head as Murphy appeared, pointed his twig at a wicker bench.

"I pray you sit down, Mr. Murphy." He paced once up and back. "How is your suite? You find it to your liking?"

"Very much so."

"Excellent," said the Sultan. "You do me honor with your presence."

Murphy waited patiently.

"I understand that you had a visitor this morning," said the Sultan.

"Yes, Mr. Trimmer."

"May I inquire the nature of the conversation?"
"It was of a personal nature," said Murphy, rather more shortly than he meant.

The Sultan nodded wistfully. "A Singhalûsi would have wasted an hour telling me half-truths--distorted enough to confuse, but not sufficiently inaccurate to anger me if I had a spy-cell on him all the time."

Murphy grinned. "A Singhalûsi has to live here the rest of his life."

A servant wheeled a frosted cabinet before them, placed goblets under two spigots, withdrew. The Sultan cleared his throat. "Trimmer is an excellent fellow, but unbelievably loquacious."

Murphy drew himself two inches of chilled rosy-pale liquor. The Sultan slapped his boots with the twig.

"Undoubtedly he confided all my private business to you, or at least as much as I have allowed him to learn."

"Well--he spoke of your hope to increase the compass of Singhalût." "That, my friend, is no hope; it's absolute necessity. Our population density is fifteen hundred to the square mile. We must expand or smother. There'll be too little food to eat, too little oxygen to breathe."

Murphy suddenly came to life. "I could make that idea the theme of my feature! Singhalût Dilemma: Expand or Perish!"

"No, that would be inadvisable, inapplicable."

Murphy was not convinced. "It sounds like a natural."

The Sultan smiled. "I'll impart an item of confidential information--although Trimmer no doubt has preceded me with it." He gave his boots an irritated whack. "To expand I need funds. Funds are best secured in an atmosphere of calm and confidence. The implication of emergency would be disastrous to my aims."

"Well," said Murphy, "I see your position."

The Sultan glanced at Murphy sidelong. "Anticipating your cooperation, my Minister of Propaganda has arranged an hour's program, stressing our progressive social attitude, our prosperity and financial prospects ..."

"But, Sultan ..."

"Well?"

"I can't allow your Minister of Propaganda to use me and Know Your Universe! as a kind of investment brochure."

The Sultan nodded wearily. "I expected you to take that attitude.... Well--what do you yourself have in mind?"

"I've been looking for something to tie to," said Murphy. "I think it's going to be the dramatic contrast between the ruined cities and the new domed valleys. How the Earth settlers succeeded where the ancient people failed to meet the challenge of the dissipating atmosphere."

"Well," the Sultan said grudgingly, "that's not too bad."

"Today I want to take some shots of the palace, the dome, the city, the paddies, groves, orchards, farms. Tomorrow I'm taking a trip out to one of the ruins."

"I see," said the Sultan. "Then you won't need my charts and statistics?"

"Well, Sultan, I could film the stuff your Propaganda Minister cooked up, and I could take it back to Earth. Howard Frayberg or Sam Catlin would tear it apart, lard in some head-hunting, a little cannibalism and temple prostitution, and you'd never know you were watching Singhalût. You'd scream with horror, and I'd be fired."

"In that case," said the Sultan, "I will leave you to the dictates of your conscience."

* * * * *

Howard Frayberg looked around the gray landscape of Riker's Planet, gazed out over the roaring black Mogador Ocean. "Sam, I think there's a story out there."

Sam Catlin shivered inside his electrically heated glass overcoat. "Out on that ocean? It's full of man-eating plesiosaurs--horrible things forty feet long."

"Suppose we worked something out on the line of Moby Dick? The White Monster of the Mogador Ocean. We'd set sail in a catamaran--"

"Us?"

"No," said Frayberg impatiently. "Of course not us. Two or three of the staff. They'd sail out there, look over these gray and red monsters, maybe fake a fight or two, but all the time they're after the legendary white one. How's it sound?"

"I don't think we pay our men enough money."

"Wilbur Murphy might do it. He's willing to look for a man riding a horse up to meet his space-ships."

"He might draw the line at a white plesiosaur riding up to meet his catamaran."

Frayberg turned away. "Somebody's got to have ideas around here...."

"We'd better head back to the space-port," said Catlin. "We got two hours to make the Sirgamesk shuttle."

* * * * *

Wilbur Murphy sat in the Barangipan, watching marionettes performing to xylophone, castanet, gong and gamelan. The drama had its roots in proto-historic Mohe[n]=0]-Dar[=0]. It had filtered down through ancient India,
medieval Burma, Malaya, across the Straits of Malacca to Sumatra and Java; from modern Java across space to Cirgamesç, five thousand years of time, two hundred light-years of space. Somewhere along the route it had met and assimilated modern technology. Magnetic beams controlled arms, legs and bodies, guided the poses and posturings. The manipulator's face, by agency of clip, wire, radio control and minuscule selsyn, projected his scowl, smile, sneer or grimace to the peaked little face he controlled. The language was that of Old Java, which perhaps a third of the spectators understood. This portion did not include Murphy, and when the performance ended he was no wiser than at the start.

Soek Panjoebang slipped into the seat beside Murphy. She wore musician's garb: a sarong of brown, blue, and black batik, and a fantastic headdress of tiny silver bells. She greeted him with enthusiasm.

"Weelbrrr! I saw you watching...."

"It was very interesting."

"Ah, yes." She sighed. "Weelbrrr, you take me with you back to Earth? You make me a great picturama star, please, Weelbrrr?"

"Well, I don't know about that."

"I behave very well, Weelbrrr." She nuzzled his shoulder, looked soulfully up with her shiny yellow-hazel eyes.

Murphy nearly forgot the experiment he intended to perform.

"What did you do today, Weelbrrr? You look at all the pretty girls?"

"Nope. I ran footage. Got the palace, climbed the ridge up to the condensation vanes. I never knew there was so much water in the air till I saw the stream pouring off those vanes! And hot!

"We have much sunlight; it makes the rice grow."

"The Sultan ought to put some of that excess light to work. There's a secret process.... Well, I'd better not say."

"Oh come, Weelbrrr! Tell me your secrets!"

"It's not much of a secret. Just a catalyst that separates clay into aluminum and oxygen when sunlight shines on it."

Soek's eyebrows rose, poised in place like a seagull riding the wind. "Weelbrrr! I did not know you for a man of learning!"

"Oh, you thought I was just a bum, eh? Good enough to make picturama stars out of gamelan players, but no special genius...."

"No, no, Weelbrrr."

"I know lots of tricks. I can take a flashlight battery, a piece of copper foil, a few transistors and bamboo tube and turn out a paralyzer gun that'll stop a man cold in his tracks. And you know how much it costs?"

"No, Weelbrrr. How much?"

"Ten cents. It wears out after two or three months, but what's the difference? I make 'em as a hobby--turn out two or three an hour."

"Weelbrrr! You're a man of marvels! Hello! We will drink!"

And Murphy settled back in the wicker chair, sipping his rice beer.

* * * * *

"Today," said Murphy, "I get into a space-suit, and ride out to the ruins in the plain. Ghatamipol, I think they're called. Like to come?"

"No, Weelbrrr." Soek Panjoebang looked off into the garden, her hands busy tucking a flower into her hair. A few minutes later she said, "Why must you waste your time among the rocks? There are better things to do and see. And it might well be--dangerous." She murmured the last word off-handedly.

"Danger? From the sjambaks?"

"Yes, perhaps."

"The Sultan's giving me a guard. Twenty men with crossbows."

"The sjambaks carry shields."

"Why should they risk their lives attacking me?"

Soek Panjoebang shrugged. After a moment she rose to her feet. "Goodbye, Weelbrrr."

"Goodbye? Isn't this rather abrupt? Won't I see you tonight?"

"If so be Allah's will."

Murphy looked after the lithe swaying figure. She paused, plucked a yellow flower, looked over her shoulder. Her eyes, yellow as the flower, lucent as water-jewels, held his. Her face was utterly expressionless. She turned, tossed away the flower with a jaunty gesture, and continued, her shoulders swinging.

Murphy breathed deeply. She might have made picturama at that....

One hour later he met his escort at the valley gate. They were dressed in space-suits for the plains, twenty men with sullen faces. The trip to Ghatamipol clearly was not to their liking. Murphy climbed into his own suit, checked
the oxygen pressure gauge, the seal at his collar. "All ready, boys?"

No one spoke. The silence drew out. The gatekeeper, on hand to let the party out, snickered. "They're all ready, Tuan."

"Well," said Murphy, "let's go then."

Outside the gate Murphy made a second check of his equipment. No leaks in his suit. Inside pressure: 14.6. Outside pressure: zero. His twenty guards morosely inspected their crossbows and slim swords.

The white ruins of Ghatamipol lay five miles across Pharasang Plain. The horizon was clear, the sun was high, the sky was black.

Murphy's radio hummed. Someone said sharply, "Look! There it goes!" He wheeled around; his guards had halted, and were pointing. He saw a fleet something vanishing into the distance.

"Let's go," said Murphy. "There's nothing out there."

"Sjambak."

"Well, there's only one of them."

"Where one walks, others follow."

"That's why the twenty of you are here."

"It is madness! Challenging the sjambaks!"

"What is gained?" another argued.

"I'll be the judge of that," said Murphy, and set off along the plain. The warriors reluctantly followed, muttering to each other over their radio intercoms.

* * * * *

The eroded city walls rose above them, occupied more and more of the sky. The platoon leader said in an angry voice, "We have gone far enough."

"You're under my orders," said Murphy. "We're going through the gate." He punched the button on his camera and passed under the monstrous portal.

The city was frailer stuff than the wall, and had succumbed to the thin storms which had raged a million years after the passing of life. Murphy marvelled at the scope of the ruins. Virgin archaeological territory! No telling what a few weeks digging might turn up. Murphy considered his expense account. Shifkin was the obstacle.

There'd be tremendous prestige and publicity for Know Your Universe! if Murphy uncovered a tomb, a library, works of art. The Sultan would gladly provide diggers. They were a sturdy enough people; they could make quite a showing in a week, if they were able to put aside their superstitions, fears and dreads.

Murphy sized one of them up from the corner of his eye. He sat on a sunny slab of rock, and if he felt uneasy he concealed it quite successfully. In fact, thought Murphy, he appeared completely relaxed. Maybe the problem of securing diggers was a minor one after all....

And here was an odd sidelight on the Singhalûsi character. Once clear of the valley the man openly wore his shirt, a fine loose garment of electric blue, in defiance of the Sultan's edict. Of course out here he might be cold....

Murphy felt his own skin crawling. How could he be cold? How could he be alive? Where was his space-suit? He lounged on the rock, grinning sardonically at Murphy. He wore heavy sandals, a black turban, loose breeches, the blue shirt. Nothing more.

Where were the others?

Murphy turned a feverish glance over his shoulder. A good three miles distant, bounding and leaping toward Singhalût, were twenty desperate figures. They all wore space-suits. This man here ... A sjambak? A wizard? A hallucination?

* * * * *

The creature rose to his feet, strode springily toward Murphy. He carried a crossbow and a sword, like those of Murphy's fleet-footed guards. But he wore no space-suit. Could there be breathable traces of an atmosphere? Murphy glanced at his gauge. Outside pressure: zero.

Two other men appeared, moving with long elastic steps. Their eyes were bright, their faces flushed. They came up to Murphy, took his arm. They were solid, corporeal. They had no invisible force fields around their heads.

Murphy jerked his arm free. "Let go of me, damn it!" But they certainly couldn't hear him through the vacuum.

He glanced over his shoulder. The first man held his naked blade a foot or two behind Murphy's bulging space-suit. Murphy made no further resistance. He punched the button on his camera to automatic. It would now run for several hours, recording one hundred pictures per second, a thousand to the inch.

The sjambaks led Murphy two hundred yards to a metal door. They opened it, pushed Murphy inside, banged it shut. Murphy felt the vibration through his shoes, heard a gradually waxing hum. His gauge showed an outside pressure of 5, 10, 12, 14, 14.5. An inner door opened. Hands pulled Murphy in, unclamped his dome.

"Just what's going on here?" demanded Murphy angrily.
Prince Ali-Tomás pointed to a table. Murphy saw a flashlight battery, aluminum foil, wire, a transistor kit, metal tubing, tools, a few other odds and ends.

"There it is," said Prince Ali-Tomás. "Get to work. Let's see one of these paralysis weapons you boast of."
"Just like that, eh?"
"Just like that."
"What do you want 'em for?"
"Does it matter?"
"I'd like to know." Murphy was conscious of his camera, recording sight, sound, odor.
"I lead an army," said Ali-Tomás, "but they march without weapons. Give me weapons! I will carry the word to Hadra, to New Batavia, to Sundaman, to Boeng-Bohôt!"

"How? Why?"
"It is enough that I will it. Again, I beg of you ..." He indicated the table.
Murphy laughed. "I've got myself in a fine mess. Suppose I don't make this weapon for you?"
"You'll remain until you do, under increasingly difficult conditions."
"I'll be here a long time."
"If such is the case," said Ali-Tomás, "we must make our arrangements for your care on a long-term basis."
Ali made a gesture. Hands seized Murphy's shoulders. A respirator was held to his nostrils. He thought of his camera, and he could have laughed. Mystery! Excitement! Thrills! Dramatic sequence for Know Your Universe! Staff-man murdered by fanatics! The crime recorded on his own camera! See the blood, hear his death-rattle, smell the poison!

The vapor choked him. What a break! What a sequence!

* * * * *

"Sirgamesk," said Howard Frayberg, "bigger and brighter every minute."
"It must've been just about in here," said Catlin, "that Wilbur's horseback rider appeared."
"That's right! Steward!"
"Yes, sir?"
"We're about twenty thousand miles out, aren't we?"
"About fifteen thousand, sir."
"Sidereal Cavalry! What an idea! I wonder how Wilbur's making out on his superstition angle?"
Sam Catlin, watching out the window, said in a tight voice, "Why not ask him yourself?"
"Eh?"
"Ask him for yourself! There he is--outside, riding some kind of critter...."
"It's a ghost," whispered Frayberg. "A man without a space-suit.... There's no such thing!"
"He sees us.... Look...."
Murphy was staring at them, and his surprise seemed equal to their own. He waved his hand. Catlin gingerly waved back.

Said Frayberg, "That's not a horse he's riding. It's a combination ram-jet and kiddie car with stirrups!"
"He's coming aboard the ship," said Catlin. "That's the entrance port down there...."
* * * * *

Wilbur Murphy sat in the captain's stateroom, taking careful breaths of air.

"How are you now?" asked Frayberg.
"Fine. A little sore in the lungs."
"I shouldn't wonder," the ship's doctor growled. "I never saw anything like it."
"How does it feel out there, Wilbur?" Catlin asked.
"It feels awful lonesome and empty. And the breath seeping up out of your lungs, never going in--that's a funny feeling. And you miss the air blowing on your skin. I never realized it before. Air feels like--like silk, like whipped cream--it's got texture...."
"But aren't you cold? Space is supposed to be absolute zero!"
"Space is nothing. It's not hot and it's not cold. When you're in the sunlight you get warm. It's better in the shade. You don't lose any heat by air convection, but radiation and sweat evaporation keep you comfortably cool."
"I still can't understand it," said Frayberg. "This Prince Ali, he's a kind of a rebel, eh?"
"I don't blame him in a way. A normal man living under those domes has to let off steam somehow. Prince Ali decided to go out crusading. I think he would have made it too--at least on Sirgamesç."
"Certainly there are many more men inside the domes...."
"When it comes to fighting," said Murphy, "a sjambak can lick twenty men in space-suits. A little nick doesn't hurt him, but a little nick bursts open a space-suit, and the man inside comes apart."
"Well," said the Captain. "I imagine the Peace Office will send out a team to put things in order now."
Catlin asked, "What happened when you woke up from the chloroform?"
"Well, nothing very much. I felt this attachment on my chest, but didn't think much about it. Still kinda woozy. I was halfway through decompression. They keep a man there eight hours, drop pressure on him two pounds an hour, nice and slow so he don't get the bends."
"Was this the same place they took you, when you met Ali?"
"Yeah, that was their decompression chamber. They had to make a sjambak out of me; there wasn't anywhere else they could keep me. Well, pretty soon my head cleared, and I saw this apparatus stuck to my chest." He poked at the mechanism on the table. "I saw the oxygen tank, I saw the blood running through the plastic pipes--blue from me to that carburetor arrangement, red on the way back in--and I figured out the whole arrangement. Carbon dioxide still exhales up through your lungs, but the vein back to the left auricle is routed through the carburetor and supercharged with oxygen. A man doesn't need to breathe. The carburetor flushes his blood with oxygen, the decompression tank adjusts him to the lack of air-pressure. There's only one thing to look out for; that's not to touch anything with your naked flesh. If it's in the sunshine it's blazing hot; if it's in the shade it's cold enough to cut. Otherwise you're free as a bird."
"But--how did you get away?"
"I saw those little rocket-bikes, and began figuring. I couldn't go back to Singhalût; I'd be lynched on sight as a sjambak. I couldn't fly to another planet--the bikes don't carry enough fuel."
"I knew when the ship would be coming in, so I figured I'd fly up to meet it. I told the guard I was going outside a minute, and I got on one of the rocket-bikes. There was nothing much to it."
"Well," said Frayberg, "it's a great feature, Wilbur--a great film! Maybe we can stretch it into two hours."
"There's one thing bothering me," said Catlin. "Who did the steward see up here the first time?"
Murphy shrugged. "It might have been somebody up here skylarking. A little too much oxygen and you start cutting all kinds of capers. Or it might have been someone who decided he had enough crusading."
"There's a sjambak in a cage, right in the middle of Singhalût. Prince Ali walks past; they look at each other eye to eye. Ali smiles a little and walks on. Suppose this sjambak tried to escape to the ship. He's taken aboard, turned over to the Sultan and the Sultan makes an example of him...."
"What'll the Sultan do to Ali?"
Murphy shook his head. "If I were Ali I'd disappear."
A loudspeaker turned on. "Attention all passengers. We have just passed through quarantine. Passengers may now disembark. Important: no weapons or explosives allowed on Singhalût!"
"This is where I came in," said Murphy.
THE END
Captain Harrison of the Ares expedition turned away from the little telescope in the bow of the rocket. "Two weeks more, at the most," he remarked. "Mars only retrogrades for seventy days in all, relative to the earth, and we've got to be homeward bound during that period, or wait a year and a half for old Mother Earth to go around the sun and catch up with us again. How'd you like to spend a winter here?"

Dick Jarvis, chemist of the party, shivered as he looked up from his notebook. "I'd just as soon spend it in a liquid air tank!" he averred. "These eighty-below zero summer nights are plenty for me."

"Well," mused the captain, "the first successful Martian expedition ought to be home long before then."

"Successful if we get home," corrected Jarvis. "I don't trust these cranky rockets--not since the auxiliary dumped me in the middle of Thyle last week. Walking back from a rocket ride is a new sensation to me."

"Which reminds me," returned Harrison, "that we've got to recover your films. They're important if we're to pull this trip out of the red. Remember how the public mobbed the first moon pictures? Our shots ought to pack 'em to the doors. And the broadcast rights, too; we might show a profit for the Academy."

"What interests me," countered Jarvis, "is a personal profit. A book, for instance; exploration books are always popular. Martian Deserts--how's that for a title?"

"Lousy!" grunted the captain. "Sounds like a cook-book for desserts. You'd have to call it 'Love Life of a Martian,' or something like that."

Jarvis chuckled. "Anyway," he said, "if we once get back home, I'm going to grab what profit there is, and never, never, get any farther from the earth than a good stratosphere plane'll take me. I've learned to appreciate the planet after plowing over this dried-up pill we're on now."

"I'll lay you odds you'll be back here year after next," grinned the Captain. "You'll want to visit your pal--that trick ostrich."

"Tweel?" The other's tone sobered. "I wish I hadn't lost him, at that. He was a good scout. I'd never have survived the dream-beast but for him. And that battle with the push-cart things--I never even had a chance to thank him."

"A pair of lunatics, you two," observed Harrison. He squinted through the port at the gray gloom of the Mare Cimmerium. "There comes the sun." He paused. "Listen, Dick--you and Leroy take the other auxiliary rocket and go out and salvage those films."

Jarvis stared. "Me and Leroy?" he echoed ungrammatically. "Why not me and Putz? An engineer would have some chance of getting us there and back if the rocket goes bad on us."

The captain nodded toward the stern, whence issued at that moment a medley of blows and guttural expletives. "Putz is going over the insides of the Ares," he announced. "He'll have his hands full until we leave, because I want every bolt inspected. It's too late for repairs once we cast off."

"And if Leroy and I crack up? That's our last auxiliary."

"Pick up another ostrich and walk back," suggested Harrison gruffly. Then he smiled. "If you have trouble, we'll hunt you out in the Ares," he finished. "Those films are important." He turned. "Leroy!"

The dapper little biologist appeared, his face questioning.

"You and Jarvis are off to salvage the auxiliary," the Captain said. "Everything's ready and you'd better start now. Call back at half-hour intervals; I'll be listening."

Leroy's eyes glistened. "Perhaps we land for specimens--no?" he queried.

"Land if you want to. This golf ball seems safe enough."

"Except for the dream-beast," muttered Jarvis with a faint shudder. He frowned suddenly. "Say, as long as we're going that way, suppose I have a look for Tweel's home! He must live off there somewhere, and he's the most important thing we've seen on Mars."

Harrison hesitated. "If I thought you could keep out of trouble," he muttered. "All right," he decided. "Have a look. There's food and water aboard the auxiliary; you can take a couple of days. But keep in touch with me, you saps!"

Jarvis and Leroy went through the airlock out to the grey plain. The thin air, still scarcely warmed by the rising sun, bit flesh and lung like needles, and they gasped with a sense of suffocation. They dropped to a sitting posture, waiting for their bodies, trained by months in acclimatization chambers back on earth, to accommodate themselves to the tenuous air. Leroy's face, as always, turned a smothered blue, and Jarvis heard his own breath rasping and
rattling in his throat. But in five minutes, the discomfort passed; they rose and entered the little auxiliary rocket that rested beside the black hull of the Ares.

The under-jets roared out their fiery atomic blast; dirt and bits of shattered biopods spun away in a cloud as the rocket rose. Harrison watched the projectile trail its flaming way into the south, then turned back to his work.

It was four days before he saw the rocket again. Just at evening, as the sun dropped behind the horizon with the suddenness of a candle falling into the sea, the auxiliary flashed out of the southern heavens, easing gently down on the flaming wings of the under-jets. Jarvis and Leroy emerged, passed through the swiftly gathering dusk, and faced him in the light of the Ares. He surveyed the two; Jarvis was tattered and scratched, but apparently in better condition than Leroy, whose dapperness was completely lost. The little biologist was pale as the nearer moon that glowed outside; one arm was bandaged in thermo-skin and his clothes hung in veritable rags. But it was his eyes that struck Harrison most strangely; to one who lived these many weary days with the diminutive Frenchman, there was something queer about them. They were frightened, plainly enough, and that was odd, since Leroy was no coward or he'd never have been one of the four chosen by the Academy for the first Martian expedition. But the fear in his eyes was more understandable than that other expression, that queer fixity of gaze like one in a trance, or like a person in an ecstasy. "Like a chap who's seen Heaven and Hell together," Harrison expressed it to himself. He was yet to discover how right he was.

He assumed a gruffness as the weary pair sat down. "You're a fine looking couple!" he growled. "I should've known better than to let you wander off alone." He paused. "Is your arm all right, Leroy? Need any treatment?"

Jarvis answered. "It's all right--just gashed. No danger of infection here, I guess; Leroy says there aren't any microbes on Mars."

"Well," exploded the Captain, "Let's hear it, then! Your radio reports sounded screwy. 'Escaped from Paradise!' Huh!"

"I didn't want to give details on the radio," said Jarvis soberly. "You'd have thought we'd gone loony."

"I think so, anyway."

"Moi aussi!" muttered Leroy. "I too!"

"Shall I begin at the beginning?" queried the chemist. "Our early reports were pretty nearly complete." He stared at Putz, who had come in silently, his face and hands blackened with carbon, and seated himself beside Harrison.

"At the beginning," the Captain decided.

"Well," began Jarvis, "we got started all right, and flew due south along the meridian of the Ares, same course I'd followed last week. I was getting used to this narrow horizon, so I didn't feel so much like being cooped under a big bowl, but one does keep overestimating distances. Something four miles away looks eight when you're used to terrestrial curvature, and that makes you guess its size just four times too large. A little hill looks like a mountain until you're almost over it."

"I know that," grunted Harrison.

"Yes, but Leroy didn't, and I spent our first couple of hours trying to explain it to him. By the time he understood (if he does yet) we were past Cimmerium and over that Xanthus desert, and then we crossed the canal with the mud city and the barrel-shaped citizens and the place where Tweel had shot the dream-beast. And nothing would do for Pierre here but that we put down so he could practice his biology on the remains. So we did.

"The thing was still there. No sign of decay; couldn't be, of course, without bacterial forms of life, and Leroy says that Mars is as sterile as an operating table."

"Comme le coeur d'une fileuse," corrected the little biologist, who was beginning to regain a trace of his usual energy. "Like an old maid's heart!"

"However," resumed Jarvis, "about a hundred of the little grey-green biopods had fastened onto the thing and were growing and branching. Leroy found a stick and knocked 'em off, and each branch broke away and became a biopod crawling around with the others. So he poked around at the creature, while I looked away from it; even dead, that rope-armed devil gave me the creeps. And then came the surprise; the thing was part plant!"

"C'est vrai!" confirmed the biologist. "It's true!"

"It was a big cousin of the biopods," continued Jarvis. "Leroy was quite excited; he figures that all Martian life is of that sort--neither plant nor animal. Life here never differentiated, he says; everything has both natures in it, even the barrel-creatures--even Tweel! I think he's right, especially when I recall how Tweel rested, sticking his beak in the ground and staying that way all night. I never saw him eat or drink, either; perhaps his beak was more in the nature of a root, and he got his nourishment that way."

"Sounds nutty to me," observed Harrison.

"Well," continued Jarvis, "we broke up a few of the other growths and they acted the same way--the pieces crawled around, only much slower than the biopods, and then stuck themselves in the ground. Then Leroy had to
catch a sample of the walking grass, and we were ready to leave when a parade of the barrel-creatures rushed by with their push-carts. They hadn't forgotten me, either; they all drummed out, 'We are v-r-r-iends--ouch!' just as they had before. Leroy wanted to shoot one and cut it up, but I remembered the battle Tweel and I had had with them, and vetoed the idea. But he did hit on a possible explanation as to what they did with all the rubbish they gathered."

"Made mud-pies, I guess," grunted the captain.

"More or less," agreed Jarvis. "They use it for food, Leroy thinks. If they're part vegetable, you see, that's what they'd want--soil with organic remains in it to make it fertile. That's why they ground up sand and biopods and other growths all together. See?"

"Dimly," countered Harrison. "How about the suicides?"

"Leroy had a hunch there, too. The suicides jump into the grinder when the mixture has too much sand and gravel; they throw themselves in to adjust the proportions."

"Rats!" said Harrison disgustedly. "Why couldn't they bring in some extra branches from outside?"

"Because suicide is easier. You've got to remember that these creatures can't be judged by earthly standards; they probably don't feel pain, and they haven't got what we'd call individuality. Any intelligence they have is the property of the whole community--like an ant-heap. That's it! Ants are willing to die for their ant-hill; so are these creatures."

"So are men," observed the captain, "if it comes to that."

"Yes, but men aren't exactly eager. It takes some emotion like patriotism to work 'em to the point of dying for their country; these things do it all in the day's work." He paused.

"Well, we took some pictures of the dream-beast and the barrel-creatures, and then we started along. We sailed over Xanthus, keeping as close to the meridian of the Ares as we could, and pretty soon we crossed the trail of the pyramid-builder. So we circled back to let Leroy take a look at it, and when we found it, we landed. The thing had completed just two rows of bricks since Tweel and I left it, and there it was, breathing in silicon and breathing out bricks as if it had eternity to do it in--which it has. Leroy wanted to dissect it with a Boland explosive bullet, but I thought that anything that had lived for ten million years was entitled to the respect due old age, so I talked him out of it. He peeped into the hole on top of it and nearly got beaned by the arm coming up with a brick, and then he chipped off a few pieces of it, which didn't disturb the creature a bit. He found the place I'd chipped, tried to see if there was any sign of healing, and decided he could tell better in two or three thousand years. So we took a few shots of it and sailed on.

"Mid afternoon we located the wreck of my rocket. Not a thing disturbed; we picked up my films and tried to decide what next. I wanted to find Tweel if possible; I figured from the fact of his pointing south that he lived somewhere near Thyle. We plotted our route and judged that the desert we were in now was Thyle II; Thyle I should be east of us. So, on a hunch, we decided to have a look at Thyle I, and away we buzzed."

"Der motors?" queried Putz, breaking his long silence.

"For a wonder, we had no trouble, Karl. Your blast worked perfectly. So we hummed along, pretty high to get a wider view, I'd say about fifty thousand feet. Thyle II spread out like an orange carpet, and after a while we came to the grey branch of the Mare Chronium that bounded it. That was narrow; we crossed it in half an hour, and there was Thyle I--same orange-hued desert as its mate. We veered south, toward the Mare Australe, and followed the edge of the desert. And toward sunset we spotted it."

"Shpotted?" echoed Putz. "Vot was shpotted?"

"The desert was spotted--with buildings! Not one of the mud cities of the canals, although a canal went through it. From the map we figured the canal was a continuation of the one Schiaparelli called Ascanius.

"We were probably too high to be visible to any inhabitants of the city, but also too high for a good look at it, even with the glasses. However, it was nearly sunset, anyway, so we didn't plan on dropping in. We circled the place; the canal went out into the Mare Australe, and there, glittering in the south, was the melting polar ice-cap! The canal drained it; we could distinguish the sparkle of water in it. Off to the southeast, just at the edge of the Mare Australe, was a valley--the first irregularity I'd seen on Mars except the cliffs that bounded Xanthus and Thyle II. We flew over the valley--" Jarvis paused suddenly and shuddered; Leroy, whose color had begun to return, seemed to pale. The chemist resumed, "Well, the valley looked all right--then! Just a gray waste, probably full of crawlers like the others."

"We circled back over the city; say, I want to tell you that place was--well, gigantic! It was colossal; at first I thought the size was due to that illusion I spoke of--you know, the nearness of the horizon--but it wasn't that. We sailed right over it, and you've never seen anything like it!

"But the sun dropped out of sight right then. I knew we were pretty far south--latitude 60--but I didn't know just how much night we'd have."

Harrison glanced at a Schiaparelli chart. "About 60--eh?" he said. "Close to what corresponds to the Antarctic
circle. You'd have about four hours of night at this season. Three months from now you'd have none at all."

"Three months!" echoed Jarvis, surprised. Then he grinned. "Right! I forget the seasons here are twice as long as ours. Well, we sailed out into the desert about twenty miles, which put the city below the horizon in case we overslept, and there we spent the night.

"You're right about the length of it. We had about four hours of darkness which left us fairly rested. We ate breakfast, called our location to you, and started over to have a look at the city.

"We sailed toward it from the east and it loomed up ahead of us like a range of mountains. Lord, what a city! Not that New York mightn't have higher buildings, or Chicago cover more ground, but for sheer mass, those structures were in a class by themselves. Gargantuans!

"There was a queer look about the place, though. You know how a terrestrial city sprawls out, a nimbus of suburbs, a ring of residential sections, factory districts, parks, highways. There was none of that here; the city rose out of the desert as abruptly as a cliff. Only a few little sand mounds marked the division, and then the walls of those gigantic structures.

"The architecture was strange, too. There were lots of devices that are impossible back home, such as set-backs in reverse, so that a building with a small base could spread out as it rose. That would be a valuable trick in New York, where land is almost priceless, but to do it, you'd have to transfer Martian gravitation there!

"Well, since you can't very well land a rocket in a city street, we put down right next to the canal side of the city, took our small cameras and revolvers, and started for a gap in the wall of masonry. We weren't ten feet from the rocket when we both saw the explanation for a lot of the queerness.

"The city was in ruin! Abandoned, deserted, dead as Babylon! Or at least, so it looked to us then, with its empty streets which, if they had been paved, were now deep under sand."

"A ruin, eh?" commented Harrison. "How old?"

"How could we tell?" countered Jarvis. "The next expedition to this golf ball ought to carry an archeologist--and a philologist, too, as we found out later. But it's a devil of a job to estimate the age of anything here; things weather so slowly that most of the buildings might have been put up yesterday. No rainfall, no earthquakes, no vegetation is here to spread cracks with its roots--nothing. The only aging factors here are the erosion of the wind--and that's negligible in this atmosphere--and the cracks caused by changing temperature. And one other agent--meteorites. They must crash down occasionally on the city, judging from the thinness of the air, and the fact that we've seen four strike ground right here near the Ares."

"Seven," corrected the captain. "Three dropped while you were gone."

"Well, damage by meteorites must be slow, anyway. Big ones would be as rare here as on earth, because big ones get through in spite of the atmosphere, and those buildings could sustain a lot of little ones. My guess at the city's age--and it may be wrong by a big percentage--would be fifteen thousand years. Even that's thousands of years older than any human civilization; fifteen thousand years ago was the Late Stone Age in the history of mankind.

"So Leroy and I crept up to those tremendous buildings feeling like pygmies, sort of awe-struck, and talking in whispers. I tell you, it was ghostly walking down that dead and deserted street, and every time we passed through a shadow, we shivered, and not just because shadows are cold on Mars. We felt like intruders, as if the great race that had built the place might resent our presence even across a hundred and fifty centuries. The place was as quiet as a grave, but we kept imagining things and peeping down the dark lanes between buildings and looking over our shoulders. Most of the structures were windowless, but when we did see an opening in those vast walls, we couldn't look away, expecting to see some horror peering out of it.

"Then we passed an edifice with an open arch; the doors were there, but blocked open by sand. I got up nerve enough to take a look inside, and then, of course, we discovered we'd forgotten to take our flashes. But we eased a few feet into the darkness and the passage debouched into a colossal hall. Far above us a little crack let in a pallid ray of daylight, not nearly enough to light the place; I couldn't even see if the hall rose clear to the distant roof. But I know the place was enormous; I said something to Leroy and a million thin echoes came slipping back to us out of the darkness. And after that, we began to hear other sounds--slithering rustling noises, and whispers, and sounds like suppressed breathing--and something black and silent passed between us and that far-away crevice of light.

"Then we saw three little greenish spots of luminosity in the dusk to our left. We stood staring at them, and suddenly they all shifted at once. Leroy yelled 'Ce sont des yeux!' and they were! They were eyes!

"Well, we stood frozen for a moment, while Leroy's yell reverberated back and forth between the distant walls, and the echoes repeated the words in queer, thin voices. There were mumblings and mutterings and whisperings and sounds like strange soft laughter, and then the three-eyed thing moved again. Then we broke for the door!

"We felt better out in the sunlight; we looked at each other sheepishly, but neither of us suggested another look at the buildings inside--though we did see the place later, and that was queer, too--but you'll hear about it when I come to it. We just loosened our revolvers and crept on along that ghostly street.
"The street curved and twisted and subdivided. I kept careful note of our directions, since we couldn't risk getting lost in that gigantic maze. Without our thermo-skin bags, night would finish us, even if what lurked in the ruins didn't. By and by, I noticed that we were veering back toward the canal, the buildings ended and there were only a few dozen ragged stone huts which looked as though they might have been built of debris from the city. I was just beginning to feel a bit disappointed at finding no trace of Tweel's people here when we rounded a corner and there he was!

"I yelled 'Tweel!' but he just stared, and then I realized that he wasn't Tweel, but another Martian of his sort. Tweel's feathery appendages were more orange hued and he stood several inches taller than this one. Leroy was sputtering in excitement, and the Martian kept his vicious beak directed at us, so I stepped forward as peace-maker. I said 'Tweel?' very questioningly, but there was no result. I tried it a dozen times, and we finally had to give it up; we couldn't connect.

"Leroy and I walked toward the huts, and the Martian followed us. Twice he was joined by others, and each time I tried yelling 'Tweel' at them but they just stared at us. So we ambled on with the three trailing us, and then it suddenly occurred to me that my Martian accent might be at fault. I faced the group and tried trilling it out the way Tweel himself did: 'T-r-r-rwee-r-r-rl!' Like that.

"And that worked! One of them spun his head around a full ninety degrees, and screeched 'T-r-r-rweee-r-r-rl!' and a moment later, like an arrow from a bow, Tweel came sailing over the nearer huts to land on his beak in front of me!

"Man, we were glad to see each other! Tweel set up a twittering and chirping like a farm in summer and went sailing up and coming down on his beak, and I would have grabbed his hands, only he wouldn't keep still long enough.

"The other Martians and Leroy just stared, and after a while, Tweel stopped bouncing, and there we were. We couldn't talk to each other any more than we could before, so after I'd said 'Tweel' a couple of times and he'd said 'Tick,' we were more or less helpless. However, it was only mid-morning, and it seemed important to learn all we could about Tweel and the city, so I suggested that he guide us around the place if he weren't busy. I put over the idea by pointing back at the buildings and then at him and us.

"Well, apparently he wasn't too busy, for he set off with us, leading the way with one of his hundred and fifty-foot nosedives that set Leroy gasping. When we caught up, he said something like 'one, one, two--two, two, four--no, no--yes, yes--rock--no breet!' That didn't seem to mean anything; perhaps he was just letting Leroy know that he could speak English, or perhaps he was merely running over his vocabulary to refresh his memory.

"Anyway, he showed us around. He had a light of sorts in his black pouch, good enough for small rooms, but simply lost in some of the colossal caverns we went through. Nine out of ten buildings meant absolutely nothing to us--just vast empty chambers, full of shadows and rustlings and echoes. I couldn't imagine their use; they didn't seem suitable for living quarters, or even for commercial purposes--trade and so forth; they might have been all right as power-houses, but what could have been the purpose of a whole city full? And where were the remains of the machinery?

"The place was a mystery. Sometimes Tweel would show us through a hall that would have housed an ocean-liner, and he'd seem to swell with pride--and we couldn't make a damn thing of it! As a display of architectural power, the city was colossal; as anything else it was just nutty!

"But we did see one thing that registered. We came to that same building Leroy and I had entered earlier--the one with the three eyes in it. Well, we were a little shaky about going in there, but Tweel twittered and trilled and kept saying, 'Yes, yes, yes!' so we followed him, staring nervously about for the thing that had watched us. However, that hall was just like the others, full of murmurs and slithering noises and shadowy things slipping away into corners. If the three-eyed creature were still there, it must have slunk away with the others.

"Tweel led us along the wall; his light showed a series of little alcoves, and in the first of these we ran into a puzzling thing--a very weird thing. As the light flashed into the alcove, I saw first just an empty space in it. Well, we were a little shaky about going in there, but Tweel twittered and trilled and evidently startled by our appearance. It had the queerest, most devilish little face!--pointed ears or horns and satanic eyes that seemed to sparkle with a sort of fiendish intelligence.

"Tweel saw it, too, and let out a screech of anger, and the creature rose on two pencil-thin legs and scuttled off with a half-terrified, half-defiant squeak. It darted past us into the darkness too quickly even for Tweel, and as it ran, something waved on its body like the fluttering of a cape. Tweel screeched angrily at it and set up a shrill hubbub that sounded like genuine rage.

"But the thing was gone, and then I noticed the weirdest of imaginable details. Where it had squatted on the floor was--a book! It had been hunched over a book!

"I took a step forward; sure enough, there was some sort of inscription on the pages--wavy white lines like a
seismograph record on black sheets like the material of Tweel's pouch. Tweel fumed and whistled in wrath, picked up the volume and slammed it into place on a shelf full of others. Leroy and I stared dumbfounded at each other.

"Had the little thing with the fiendish face been reading? Or was it simply eating the pages, getting physical nourishment rather than mental? Or had the whole thing been accidental?"

"If the creature were some rat-like pest that destroyed books, Tweel's rage was understandable, but why should he try to prevent an intelligent being, even though of an alien race, from reading--if it was reading? I don't know; I did notice that the book was entirely undamaged, nor did I see a damaged book among any that we handled. But I have an odd hunch that if we knew the secret of the little cape-clothed imp, we'd know the mystery of the vast abandoned city and of the decay of Martian culture.

"Well, Tweel quieted down after a while and led us completely around that tremendous hall. It had been a library, I think; at least, there were thousands upon thousands of those queer black-paged volumes printed in wavy lines of white. There were pictures, too, in some; and some of these showed Tweel's people. That's a point, of course; it indicated that his race built the city and printed the books. I don't think the greatest philologist on earth will ever translate one line of those records; they were made by minds too different from ours.

"Tweed could read them, naturally. He twittered off a few lines, and then I took a few of the books, with his permission; he said 'no, no!' to some and 'yes, yes!' to others. Perhaps he kept back the ones his people needed, or perhaps he let me take the ones he thought we'd understand most easily. I don't know; the books are outside there in the rocket.

"Then he held that dim torch of his toward the walls, and they were pictured. Lord, what pictures! They stretched up and up into the blackness of the roof, myriadous and gigantic. I couldn't make much of the first wall; it seemed to be a portrayal of a great assembly of Tweel's people. Perhaps it was meant to symbolize Society or Government. But the next wall was more obvious; it showed creatures at work on a colossal machine of some sort, and that would be Industry or Science. The back wall had corroded away in part, from what we could see, I suspected the scene was meant to portray Art, but it was on the fourth wall that we got a shock that nearly dazed us.

"I think the symbol was Exploration or Discovery. This wall was a little plainer, because the moving beam of daylight from that crack lit up the higher surface and Tweel's torch illuminated the lower. We made out a giant seated figure, one of the beaked Martians like Tweel, but with every limb suggesting heaviness, weariness. The arms dropped inertly on the chair, the thin neck bent and the beak rested on the body, as if the creature could scarcely bear its own weight. And before it was a queer kneeling figure, and at sight of it, Leroy and I almost reeled against each other. It was, apparently, a man!"

"A man!" bellowed Harrison. "A man you say?"

"I said apparently," retorted Jarvis. "The artist had exaggerated the nose almost to the length of Tweel's beak, but the figure had black shoulder-length hair, and instead of the Martian four, there were five fingers on its outstretched hand! It was kneeling as if in worship of the Martian, and on the ground was what looked like a pottery bowl full of some food as an offering. Well! Leroy and I thought we'd gone screwy!"

"And Putz and I think so, too!" roared the captain.

"Maybe we all have," replied Jarvis, with a faint grin at the pale face of the little Frenchman, who returned it in silence. "Anyway," he continued, "Tweed was squeaking and pointing at the figure, and saying 'Tick! Tick!' so he recognized the resemblance--and never mind any cracks about my nose!" he warned the captain. "It was Leroy who made the important comment; he looked at the Martian and said 'Thoth! The god Thoth!'"

"Oui!" confirmed the biologist. "Comme l'Egypte!"

"Yeah," said Jarvis. "Like the Egyptian ibis-headed god--the one with the beak. Well, no sooner did Tweel hear the name Thoth than he set up a clamor of twittering and squeaking. He pointed at himself and said 'Thoth! Thoth!' and then waved his arm all around and repeated it. Of course he often did queer things, but we both thought we understood what he meant. He was trying to tell us that his race called themselves Thoth. Do you see what I'm getting at?"

"I see, all right," said Harrison. "You think the Martians paid a visit to the earth, and the Egyptians remembered it in their mythology. Well, you're off, then; there wasn't any Egyptian civilization fifteen thousand years ago."

"Wrong!" grinned Jarvis. "It's too bad we haven't an archeologist with us, but Leroy tells me that there was a stone-age culture in Egypt then, the pre-dynastic civilization."

"Well, even so, what of it?"

"Plenty! Everything in that picture proves my point. The attitude of the Martian, heavy and weary--that's the unnatural strain of terrestrial gravitation. The name Thoth; Leroy tells me Thoth was the Egyptian god of philosophy and the inventor of writing! Get that? They must have picked up the idea from watching the Martian take notes. It's too much for coincidence that Thoth should be beaked and ibis-headed, and that the beaked Martians call themselves Thoth."
"Well, I'll be hanged! But what about the nose on the Egyptian? Do you mean to tell me that stone-age Egyptians had longer noses than ordinary men?"

"Of course not! It's just that the Martians very naturally cast their paintings in Martianized form. Don't human beings tend to relate everything to themselves? That's why dugongs and manatees started the mermaid myths--sailors thought they saw human features on the beasts. So the Martian artist, drawing either from descriptions or imperfect photographs, naturally exaggerated the size of the human nose to a degree that looked normal to him. Or anyway, that's my theory."

"Well, it'll do as a theory," grunted Harrison. "What I want to hear is why you two got back here looking like a couple of year-before-last bird's nests."

Jarvis shuddered again, and cast another glance at Leroy. The little biologist was recovering some of his accustomed poise, but he returned the glance with an echo of the chemist's shudder.

"We'll get to that," resumed the latter. "Meanwhile I'll stick to Tweel and his people. We spent the better part of three days with them, as you know. I can't give every detail, but I'll summarize the important facts and give our conclusions, which may not be worth an inflated franc. It's hard to judge this dried-up world by earthly standards.

"We took pictures of everything possible; I even tried to photograph that gigantic mural in the library, but unless Tweel's lamp was unusually rich in actinic rays, I don't suppose it'll show. And that's a pity, since it's undoubtedly the most interesting object we've found on Mars, at least from a human viewpoint.

"Tweel was a very courteous host. He took us to all the points of interest--even the new water-works."

Putz's eyes brightened at the word. "Vater-vorks?" he echoed. "For vot?"

"For the canal, naturally. They have to build up a head of water to drive it through; that's obvious." He looked at the captain. "You told me yourself that to drive water from the polar caps of Mars to the equator was equivalent to forcing it up a twenty-mile hill, because Mars is flattened at the poles and bulges at the equator just like the earth."

"That's true," agreed Harrison.

"Well," resumed Jarvis, "this city was one of the relay stations to boost the flow. Their power plant was the only one of the giant buildings that seemed to serve any useful purpose, and that was worth seeing. I wish you'd seen it, Karl; you'll have to make what you can from our pictures. It's a sun-power plant!"

Harrison and Putz stared. "Sun-power!" grunted the captain. "That's primitive!" And the engineer added an emphatic "Ja!" of agreement.

"Not as primitive as all that," corrected Jarvis. "The sunlight focused on a queer cylinder in the center of a big concave mirror, and they drew an electric current from it. The juice worked the pumps."

"A thermocouple!" ejaculated Putz.

"That sounds reasonable; you can judge by the pictures. But the power-plant had some queer things about it. The queerest was that the machinery was tended, not by Tweel's people, but by some of the barrel-shaped creatures like the ones in Xanthus!" He gazed around at the faces of his auditors; there was no comment.

"Get it?" he resumed. At their silence, he proceeded, "I see you don't. Leroy figured it out, but whether rightly or wrongly, I don't know. He thinks that the barrels and Tweel's race have a reciprocal arrangement--well, like bees and flowers on earth. The flowers give honey for the bees; the bees carry the pollen for the flowers. See? The barrels tend the works and Tweel's people build the canal system. The Xanthus city must have been a boosting station; that explains the mysterious machines I saw. And Leroy believes further that it isn't an intelligent arrangement--not on the part of the barrels, at least--but that it's been done for so many thousands of generations that it's become instinctive--a tropism--just like the actions of ants and bees. The creatures have been bred to it!"

"Nuts!" observed Harrison. "Let's hear you explain the reason for that big empty city, then."

"Sure. Tweel's civilization is decadent, that's the reason. It's a dying race, and out of all the millions that must once have lived there, Tweel's couple of hundred companions are the remnant. They're an outpost, left to tend the source of the water at the polar cap; probably there are still a few respectable cities left somewhere on the canal system, most likely near the tropics. It's the last gasp of a race--and a race that reached a higher peak of culture than Man!"

"Huh?" said Harrison. "Then why are they dying? Lack of water?"

"I don't think so," responded the chemist. "If my guess at the city's age is right, fifteen thousand years wouldn't make enough difference in the water supply--nor a hundred thousand, for that matter. It's something else, though the water's doubtless a factor."

"Das wasser," cut in Putz. "Vere goes dot?"

"Even a chemist knows that!" scoffed Jarvis. "At least on earth. Here I'm not so sure, but on earth, every time there's a lightning flash, it electrolyzes some water vapor into hydrogen and oxygen, and then the hydrogen escapes into space, because terrestrial gravitation won't hold it permanently. And every time there's an earthquake, some water is lost to the interior. Slow--but damned certain." He turned to Harrison. "Right, Cap?"
"Right," conceded the captain. "But here, of course--no earthquakes, no thunderstorms--the loss must be very slow. Then why is the race dying?"

"The sun-power plant answers that," countered Jarvis. "Lack of fuel! Lack of power! No oil left, no coal left--if Mars ever had a Carboniferous Age--and no water-power--just the driblets of energy they can get from the sun. That's why they're dying."

"With the limitless energy of the atom?" exploded Harrison.

"They don't know about atomic energy. Probably never did. Must have used some other principle in their spacecraft."

"Then," snapped the captain, "what makes you rate their intelligence above the human? We've finally cracked open the atom!"

"Sure we have. We had a clue, didn't we? Radium and uranium. Do you think we'd ever have learned how without those elements? We'd never even have suspected that atomic energy existed!"

"Well? Haven't they?"

"No, they haven't. You've told me yourself that Mars has only 73 percent of the earth's density. Even a chemist can see that that means a lack of heavy metals--no osmium, no uranium, no radium. They didn't have the clue."

"Even so, that doesn't prove they're more advanced than we are. If they were more advanced, they'd have discovered it anyway."

"Maybe," conceded Jarvis. "I'm not claiming that we don't surpass them in some ways. But in others, they're far ahead of us."

"In what, for instance?"

"Well--socially, for one thing."

"Huh? How do you mean?"

Jarvis glanced in turn at each of the three that faced him. He hesitated. "I wonder how you chaps will take this," he muttered. "Naturally, everybody likes his own system best." He frowned. "Look here--on the earth we have three types of society, haven't we? And there's a member of each type right here. Putz lives under a dictatorship--an autocracy. Leroy's a citizen of the Sixth Commune in France. Harrison and I are Americans, members of a democracy. There you are--autocracy, democracy, communism--the three types of terrestrial societies. Tweel's people have a different system from any of us."

"Different? What is it?"

"The one no earthly nation has tried. Anarchy!"

"Anarchy!" the captain and Putz burst out together.

"That's right."

"But--" Harrison was sputtering. "What do you mean--they're ahead of us? Anarchy! Bah!"

"All right--bah!" retorted Jarvis. "I'm not saying it would work for us, or for any race of men. But it works for them."

"But--anarchy!" The captain was indignant.

"Well, when you come right down to it," argued Jarvis defensively, "anarchy is the ideal form of government, if it works. Emerson said that the best government was that which governs least, and so did Wendell Phillips, and I think George Washington. And you can't have any form of government which governs less than anarchy, which is no government at all!"

The captain was sputtering. "But--it's unnatural! Even savage tribes have their chiefs! Even a pack of wolves has its leader!"

"Well," retorted Jarvis defiantly, "that only proves that government is a primitive device, doesn't it? With a perfect race you wouldn't need it at all; government is a confession of weakness, isn't it? It's a confession that part of the people won't cooperate with the rest and that you need laws to restrain those individuals which a psychologist calls anti-social. If there were no anti-social persons--criminals and such--you wouldn't need laws or police, would you?"

"But government! You'd need government! How about public works--wars--taxes?"

"No wars on Mars, in spite of being named after the War God. No point in wars here; the population is too thin and too scattered, and besides, it takes the help of every single community to keep the canal system functioning. No taxes because, apparently, all individuals cooperate in building public works. No competition to cause trouble, because anybody can help himself to anything. As I said, with a perfect race government is entirely unnecessary."

"And do you consider the Martians a perfect race?" asked the captain grimly.

"Not at all! But they've existed so much longer than man that they're evolved, socially at least, to the point where they don't need government. They work together, that's all." Jarvis paused. "Queer, isn't it--as if Mother Nature were carrying on two experiments, one at home and one on Mars. On earth it's trial of an emotional, highly
competitive race in a world of plenty; here it's the trial of a quiet, friendly race on a desert, unproductive, and inhospitable world. Everything here makes for cooperation. Why, there isn't even the factor that causes so much trouble at home--sex!"

"Huh?"

"Yeah: Tweel's people reproduce just like the barrels in the mud cities; two individuals grow a third one between them. Another proof of Leroy's theory that Martian life is neither animal nor vegetable. Besides, Tweel was a good enough host to let him poke down his beak and twiddle his feathers, and the examination convinced Leroy."

"Oui," confirmed the biologist. "It is true."

"But anarchy!" grumbled Harrison disgustedly. "It would show up on a dizzy, half-dead pill like Mars!"

"It'll be a good many centuries before you'll have to worry about it on earth," grinned Jarvis. He resumed his narrative.

"Well, we wandered through that sepulchral city, taking pictures of everything. And then--" Jarvis paused and shuddered--"then I took a notion to have a look at that valley we'd spotted from the rocket. I don't know why. But when we tried to steer Tweel in that direction, he set up such a squawking and screeching that I thought he'd gone batty."

"If possible!" jeered Harrison.

"So we started over there without him; he kept wailing and screaming, 'No-no-no! Tick!' but that made us the more curious. He sailed over our heads and stuck on his beak, and went through a dozen other antics, but we ploughed on, and finally he gave up and trudged disconsolately along with us.

"The valley wasn't more than a mile southeast of the city. Tweel could have covered the distance in twenty jumps, but he lagged and loitered and kept pointing back at the city and wailing 'No--no--no!' Then he'd sail up into the air and zip down on his beak directly in front of us, and we'd have to walk around him. I'd seen him do lots of crazy things before, of course; I was used to them, but it was as plain as print that he didn't want us to see that valley."

"Why?" queried Harrison.

"You asked why we came back like tramps," said Jarvis with a faint shudder. "You'll learn. We plugged along up a low rocky hill that bounded it, and as we neared the top, Tweel said, 'No breet', Tick! No breet!' Well, those were the words he used to describe the silicon monster; they were also the words he had used to tell me that the image of Fancy Long, the one that had almost lured me to the dream-beast, wasn't real. I remembered that, but it meant nothing to me--then!"

"Right after that, Tweel said, 'You one-one-two, he one-one-two,' and then I began to see. That was the phrase he had used to explain the dream-beast to tell me that what I thought, the creature thought--to tell me how the thing lured its victims by their own desires. So I warned Leroy; it seemed to me that even the dream-beast couldn't be dangerous if we were warned and expecting it. Well, I was wrong!"

"As we reached the crest, Tweel spun his head completely around, so his feet were forward but his eyes looked backward, as if he feared to gaze into the valley. Leroy and I stared out over it, just a gray waste like this around us, with the gleam of the south polar cap far beyond its southern rim. That's what it was one second; the next it was--Paradise!"

"What?" exclaimed the captain.

"Jarvis turned to Leroy. "Can you describe it?" he asked.\

The biologist waved helpless hands, "C'est impossible!" he whispered. "Il me rend muet!"

"It strikes me dumb, too," muttered Jarvis. "I don't know how to tell it; I'm a chemist, not a poet. Paradise is as good a word as I can think of, and that's not at all right. It was Paradise and Hell in one!"

"Will you talk sense?" growled Harrison.

"As much of it as makes sense. I tell you, one moment we were looking at a grey valley covered with blobby plants, and the next--Lord! You can't imagine that next moment! How would you like to see all your dreams made real? Every desire you'd ever had gratified? Everything you'd ever wanted there for the taking?"

"I'd like it fine!" said the captain.

"You're welcome, then!--not only your noble desires, remember! Every good impulse, yes--but also every nasty little wish, every vicious thought, everything you'd ever desired, good or bad! The dream-beasts are marvelous salesmen, but they lack the moral sense!"

"The dream-beasts?"

"Yes. It was a valley of them. Hundreds, I suppose, maybe thousands. Enough, at any rate, to spread out a complete picture of your desires, even all the forgotten ones that must have been drawn out of the subconscious. A Paradise--of sorts! I saw a dozen Fancy Longs, in every costume I'd ever admired on her, and some I must have imagined. I saw every beautiful woman I've ever known, and all of them pleading for my attention. I saw every
lovely place I'd ever wanted to be, all packed queerly into that little valley. And I saw--other things." He shook his head soberly. "It wasn't all exactly pretty. Lord! How much of the beast is left in us! I suppose if every man alive could have one look at that weird valley, and could see just once what nastiness is hidden in him--well, the world might gain by it. I thanked heaven afterwards that Leroy--and even Tweel--saw their own pictures and not mine!"

Jarvis paused again, then resumed, "I turned dizzy with a sort of ecstasy. I closed my eyes--and with eyes closed, I still saw the whole thing! That beautiful, evil, devilish panorama was in my mind, not my eyes. That's how those fiends work--through the mind. I knew it was the dream-beasts; I didn't need Tweel's wail of 'No breet! No breet!' But--I couldn't keep away! I knew it was death beckoning, but it was worth it for one moment with the vision."

"Which particular vision?" asked Harrison dryly.

Jarvis flushed. "No matter," he said. "But beside me I heard Leroy's cry of 'Yvonne! Yvonne!' and I knew he was trapped like myself. I fought for sanity; I kept telling myself to stop, and all the time I was rushing headlong into the snare!"

"Then something tripped me. Tweel! He had come leaping from behind; as I crashed down I saw him flash over me straight toward--toward what I'd been running to, with his vicious beak pointed right at her heart!"

"Oh!" nodded the captain. "Her heart!"

"Never mind that. When I scrambled up, that particular image was gone, and Tweel was in a twist of black ropey arms, just as when I first saw him. He'd missed a vital point in the beast's anatomy, but was jabbing away desperately with his beak."

"Somehow, the spell had lifted, or partially lifted. I wasn't five feet from Tweel, and it took a terrific struggle, but I managed to raise my revolver and put a Boland shell into the beast. Out came a spurt of horrible black corruption, drenching Tweel and me--and I guess the sickening smell of it helped to destroy the illusion of that valley of beauty. Anyway, we managed to get Leroy away from the devil that had him, and the three of us staggered to the ridge and over. I had presence of mind enough to raise my camera over the crest and take a shot of the valley, but I'll bet it shows nothing but gray waste and writhing horrors. What we saw was with our minds, not our eyes."

Jarvis paused and shuddered. "The brute half poisoned Leroy," he continued. "We dragged ourselves back to the auxiliary, called you, and did what we could to treat ourselves. Leroy took a long dose of the cognac that we had with us; we didn't dare try anything of Tweel's because his metabolism is so different from ours that what cured him might kill us. But the cognac seemed to work, and so, after I'd done one other thing I wanted to do, we came back here--and that's all."

"All, is it?" queried Harrison. "So you've solved all the mysteries of Mars, eh?"

"Not by a damned sight!" retorted Jarvis. "Plenty of unanswered questions are left."

"Ja!" snapped Putz. "Der evaporation--dot iss shtopped how?"

"In the canals? I wondered about that, too; in those thousands of miles, and against this low air-pressure, you'd think they'd lose a lot. But the answer's simple; they float a skin of oil on the water."

"None of my business," Harrison chuckled. "One more question, Jarvis. What was the one other thing you did here--and that's all."

"Well, there does go the last mystery then," mused Harrison.

"Yeah?" queried Jarvis sardonically. "You answer these, then. What was the nature of that vast empty city? Why do the Martians need canals, since we never saw them eat or drink? Did they really visit the earth before the dawn of history, and, if not atomic energy, what powered their ship? Since Tweel's race seems to need little or no water, are they merely operating the canals for some higher creature that does? Are there other intelligences on Mars? If not, what was the demon-faced imp we saw with the book? There are a few mysteries for you!"

"I know one or two more!" growled Harrison, glaring suddenly at little Leroy. "You and your visions! Yvonne! eh? Your wife's name is Marie, isn't it?"

The little biologist turned crimson. "Oui," he admitted unhappily. He turned pleading eyes on the captain. "Please," he said. "In Paris tout le monde--everybody he think differently of those things--no?" He twisted uncomfortably. "Please, you will not tell Marie, n'est-ce pas?"

Harrison chuckled. "None of my business," he said. "One more question, Jarvis. What was the one other thing
you did before returning here?"

Jarvis looked diffident. "Oh--that." He hesitated. "Well I sort of felt we owed Tweel a lot, so after some trouble, we coax him into the rocket and sailed him out to the wreck of the first one, over on Thyle II. Then," he finished apologetically, "I showed him the atomic blast, got it working--and gave it to him!"

"You what?" roared the Captain. "You turned something as powerful as that over to an alien race--maybe some day as an enemy race?"

"Yes, I did," said Jarvis. "Look here," he argued defensively. "This lousy, dried-up pill of a desert called Mars'll never support much human population. The Sahara desert is just as good a field for imperialism, and a lot closer to home. So we'll never find Tweel's race enemies. The only value we'll find here is commercial trade with the Martians. Then why shouldn't I give Tweel a chance for survival? With atomic energy, they can run their canal system a hundred per cent instead of only one out of five, as Putz's observations showed. They can repopulate those ghostly cities; they can resume their arts and industries; they can trade with the nations of the earth--and I'll bet they can teach us a few things," he paused, "if they can figure out the atomic blast, and I'll lay odds they can. They're no fools, Tweel and his ostrich-faced Martians!"

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PRIESTESS OF THE FLAME
By Sewell Peaslee Wright

I have been rather amused by the protests which have come to me regarding the "disparaging" comments I have made, in previous tales of the Special Patrol Service, regarding women. The rather surprising thing about it is that the larger proportion of these have come from men. Young men, of course.

Now, as a matter of fact, a careful search has failed to reveal to me any very uncomplimentary remarks. I have suggested, I believe, that women have, in my experience, shown a sad lack of ability to understand mechanical contrivances. Perhaps I have pictured some few of them as frivolous and shallow. If I have been unfair, I wish now to make humble apology.

I am not, as some of my correspondents have indicated, a bitter old man, who cannot remember his youth. I remember it very well indeed, else these tales would not be forthcoming. And women have their great and proper place, even in a man's universe.

Some day, perhaps, the mood will seize me to write of my own love affair. That surprises you? You smile to think that old John Hanson, lately a commander of the Special Patrol Service, now retired, should have had a love affair? Well, 'twas many years ago, before these eyes lost their fire, and before these brown, skinny hands woreied as quickly as they wearied now....

But I have known many women--good women and bad; great women and women of small souls; kindly women, and women fierce as wild bears are fierce. Divinity has dealt lavishly with women; has given them an emotional range far greater than man's. They can sink to depths unknown to masculinity; they can rise to heights of love and sacrifice before which man can only stand with reverently bowed head and marvel.

This is a story of a woman--one of those no man could know and not remember. I make no apologies for her; I pay her no homage. I record only a not inaccurate account of an adventure of my youth, in which she played a part; I leave to you the task of judging her.

* * * * *

We were some three days out from Base, as I recall it, on a mission which promised a welcome interlude in a monotonous sequence of routine patrols. I was commander then of the Ertak, one of the crack ships of the Service, and assisted by the finest group of officers, I believe, that any man ever had under him.

I was standing a watch in the navigating room with Hendricks, my junior officer, when Correy brought us the amazing news.

Correy was my first officer, a square-jawed fighting man if one ever breathed, a man of action, such as these effete times do not produce. His eyes were fairly blazing as he came into the room, and his generous mouth was narrowed into a grim line.

"What's up, Mr. Correy?" I asked apprehensively. "Trouble aboard?"

"Plenty of it, sir!" he snapped. "A stowaway!"

"A stowaway?" I repeated wonderingly. A new experience, but hardly cause for Correy's obvious anger. "Well, send him below, and tell Miro to put him to work--the hardest work he can find. We'll make him--"

"Him?" blurted Correy. "If it were a him it wouldn't be so bad, sir. But it's a she!"
To understand the full effect of the statement, you'd have to be steeped in the traditions of the Service. Women are seldom permitted on board a ship of the Service; despite their many admirable qualities, women play the very devil with discipline. And here were we, three days out from Base on a tour of duty which promised more than a little excitement, with a female stowaway on board!

I felt my own mouth set grimly.
"Where is she, Mr. Correy?" I asked quietly.

"In my quarters, under guard. It was my watch below, as you know, sir. I entered my stateroom, figuring on catching forty winks, and there she was, seated in my big chair, smiling at me.

"Well, for a second I couldn't speak. I just stared at her, and she kept smiling back at me. 'What are you doing here?' I managed to ask her, at last. 'Do you know where you are?'

"'I'll talk to your commanding officer,' she told me, cool as you please. 'Will you bring him, please?'

"You'll see him plenty soon enough,' I snapped at her, getting over my surprise somewhat by that time. I called in a couple of men to keep her from getting into mischief, and reported to you. What are your orders, sir?"

I hesitated a second, wondering. From Correy's account, she must be a rather remarkable person.

"Bring her up here, if you will, Mr. Correy. I'd like to see her before we put her in the brig." The brig, I might explain, was a small room well forward, where members of the crew were confined for discipline.

"Right, sir!" It seemed to me that there was a peculiar twinkle in Correy's eyes as he went out, and I wondered about it while we waited for him to return with the prisoner.

"What an infernal nuisance, sir!" complained Hendricks, looking up from his glowing charts. "We'll be the laughing-stock of the Service if this leaks out!"

"When it leaks out," I corrected him glumly. I'd already thought of the unpleasant outcome he mentioned. "I'll have to report it, of course, and the whole Service will know about it. We'll just have to grin and make the most of it, I guess." There was still another possibility which I didn't mention: the silver-sleeves at Base would very likely call me on the carpet for permitting such a thing to happen. A commander was supposed to be responsible for everything that happened; no excuses available in the Service as it was in those days.

I scowled forbiddingly as I heard Correy open the door; at least I could make her very sorry she had selected the Ertak for her adventure. I am afraid, however, that it was a startled, rather than a scowling face to which she lifted her eyes.

"This is the stowaway, sir," said Correy briskly, closing the door. He was watching my face, and I saw, now, the reason for the twinkle in his eye when I mentioned placing the stowaway in the brig.

The woman was startlingly beautiful; one of the most beautiful women I have ever seen, and I have roamed the outer limits of space, and seen the women of many worlds. Hendricks, standing behind me, gasped audibly as his eyes fell upon her.

The stowaway was regally tall and exquisitely modeled. Her hair was the color of pale morning sunlight on Earth; her eyes an amazing blue, the equal of which I have never seen.

She was beautiful, but not coldly so. Despite her imperious bearing, there was something seductive about the soft curves of her beautiful body; something to rouse the pulses of a man in the langour of her intensely blue eyes, and the full, sensuous lips, scarlet as a smear of fresh blood.

"So this is the stowaway," I said, trying to keep my voice coolly indifferent. "What is your name?"

"I should prefer," she replied, speaking the universal language with a sibilant accent that was very fascinating, "to speak with you privately."

"You will speak with me," I informed her crisply, "in the presence of these officers. I repeat: what is your name?"

She smiled faintly, her eyes compelling mine.

"I am called Liane," she said. "Chief Priestess of the Flame. Mother of Life. Giver of Death. I believe my name and position are not unknown to you, Commander Hanson?"

Known to me? If Base was not in error--and for all their faults, the silver-sleeves are seldom wrong in matters of this sort--this woman was the reason for our present mission.

"They are known to me," I admitted. "They do not explain, however, your presence here."

"And yet they should," protested Liane gently. "I was taken from my own people by those who had no right to command me. I was subjected to the indignity of questioning by many men. I have merely taken the simplest and quickest way of returning to my own people."

"You know, then, our destination?"
"I was informed of that by those who questioned me," nodded Liane. "Then, since I had been assured I was an honored guest, and no prisoner, I secreted myself aboard the ship, hiding in a small room nearly filled with what I took to be spare parts. I had provisions, and a few personal belongings. When I felt sufficient time had elapsed to make a return improbable, I donned attire more fitting than the masculine workman's guise in which I had secreted myself, and--I believe you are acquainted with the remaining facts."

"I am. I will consider your case and advise you later. Mr. Correy, will you conduct the stowaway to my quarters and place her under guard? Return when you have attended to this matter, and ask Mr. Kincaide to do likewise."

"To your quarters, you said, sir?" asked Correy, his eyes very serious, but not sufficiently so to entirely disguise the twinkle in their depths. "Not to the brig?"

I could cheerfully have kicked him.

"To my quarters," I repeated severely, "and under guard."

"Right, sir," said Correy.

* * * * *

While we were awaiting Correy and Kincaide, I briefly considered the rather remarkable story which had been told me at Base.

"Commander Hanson," the Chief of Command had said, "we're turning over to you a very delicate mission. You've proved yourself adept at handling matters of this kind, and we have every confidence you'll bring this one to a highly successful conclusion."

"Thank you, sir; we'll do our best," I had told him.

"I know that; the assurance isn't necessary, although I appreciate it. Briefly, here's what we're confronted with:"

"Lakos, as you know, is the principal source of temite for the universe. And without temite, modern space travel would be impossible; we would have to resort to earlier and infinitely more crude devices. You realize that, of course.

"Now, for some time, those in charge of operations on Lakos have complained of a growing unrest, increasing insubordination on the part of the Lakonians, and an alarming decrease in production.

"It has been extremely difficult--indeed, impossible--to determine the reasons for this, for, as you are perhaps aware, the atmosphere of Lakos is permeated with certain mineral fumes which, while not directly harmful to those of other worlds, do serve to effectively block the passage of those rays of the sun which are essential to the health of beings like ourselves. Those in charge of operations there are supplied artificially with these rays, as you are in your ship, by means of emanations from ethon tubes, but they have to be transferred at frequent periods to other fields of activity. The constant shifting about produces a state of disorder which makes the necessary investigation impossible. Too, operations are carried on with an insufficient personnel, because it is extremely difficult to induce desirable types of volunteer for such disagreeable service.

"We have, however, determined a few very important facts. This unrest has been caused by the activities of a secret organization or order known as the Worshipers of the Flame. That's as close a translation as I can give you. It sounds harmless enough, but from what we gather, it is a sinister and rather terrible organization, with a fanatical belief amounting, at times, to a veritable frenzy. These Lakonians are a physically powerful but mentally inadequate people, as perhaps you are aware.

"The leader of this order or cult call it what you will--seems to be a woman: a very fascinating creature, infinitely superior to her people as a whole; what biologists call a 'sport,' I believe--a radical departure from the general racial trend.

"This leader calls herself Liane, Chief Priestess of the Flame, Mother of Life, Giver of Death, and a few other high-sounding things. We have called her here to Base for questioning, and while she has been here some time, we have so far learned next to nothing from her. She is very intelligent, very alluring, very feminine--but reveals nothing she does not wish to reveal.

"Our purpose in having her brought here was two-fold: first, to gain what information we could from her, and if possible, prevail upon her to cease her activities; second, to deprive her cult of her leadership while you conducted your investigation.

"Your orders, then, are simple: you will proceed at once to Lakos, and inquire into the activities of this order. Somehow, it must be crushed; the means I shall leave to you. You will have complete coöperation of those in charge of operations on Lakos; they are Zenians and natives of Earth, and you may depend upon them implicitly. Do not, however, place any faith in any Lakonians; the entire native populace may well be suspected of participation in the rites of this cult, and they are a treacherous and ruthless people at best. Have you any questions, Commander?"

"None," I had told him. "I have full authority to take any action I see fit?"

"Yes, at your discretion. Of course," he had added rather hastily, "you appreciate the importance of our supply of temite. Only Lakonians can gather it in commercial quantities, under the existing conditions on Lakos, and our
reserve supply is not large. We naturally wish to increase production there, rather than endanger it. It's a delicate mission, but I'm trusting you and your men to handle it for us. I know you will."

He had arisen then, smilingly, and offered his hand to me in that gesture which marks a son of Earth throughout the universe, thus bringing the interview to a close.

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In talking the things over with my officers, we had decided the mission promised to be an interesting one, but full of difficulties. The Ertak had set down on Lakos more than once, and we all had unpleasant memories of the place.

The sunlight on Lakos, such as it was, was pale green and thin, lacking in warmth and vitality. The vegetation was flaccid and nearly colorless, more like a mushroom growth than anything else; and the inhabitants were suspicious and unfriendly.

Remembering the typical Lakonians, it was all the more surprising that a gracious creature like Liane could have sprung from their midst. They were a beetle-browed, dark race, with gnarled muscles and huge, knotted joints, speaking a guttural language all their own. Few spoke the universal language.

But Liane, Chief Priestess of the Flame! The image of her kept drifting back to my mind. There was a woman to turn any man's head! And such a turning would be dangerous, for Liane had no soft woman's soul, if I had read her brilliant blue eyes aright.

"Rather a beauty, isn't she, sir?" commented Hendricks as I paused in my restless pacing, and glanced at the two-dimensional charts.

"The stowaway? Rather," I agreed shortly. "And chief instigator of the trouble we've been sent to eliminate."

"That seems almost--almost unbelievable, doesn't it?"

"Why, Mr. Hendricks?"

Correy and Kincaide entered before my junior officer could reply. I think he was rather glad of the excuse for not presenting his reasons.

"Well, sir, she's under guard," reported Correy. "And now what's to be done about her?"

"That," I admitted, "is a question. After all, she's an important personage at home. She was brought to Base as a guest, probably something of a guest of honor, of the Council, I gather. And, considering the work that's cut out for us, it would seem like a poor move to antagonize her unduly. What do you gentlemen think?"

"I think you're right, sir," said Hendricks quickly. "I believe she should be given every consideration."

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Kincaide, my level-headed second officer, glanced curiously at Hendricks. "I see she's made one friend, anyway," he said. "Don't let yourself slip, my boy; I've run across her kind before. They're dangerous."

"Thanks, but the warning's not necessary, Mr. Kincaid," replied Hendricks stiffly, an angry flush mounting to his cheeks. "I merely expressed a requested opinion."

"We'll let that phase of it drop, gentlemen," I cut in sharply, as I saw Kincaide's eyes flash. Trust a woman to stir up strife and ill-feeling! "What shall we do with her?"

"I believe, sir," said Correy, "that we'd be nice to her. Treat her as an honored guest; make the best of a bad situation. If she's what the Chief thought she is, the boss of this outfit we've got to lick, then there's no need of stroking her the wrong way, as I see it."

"And you, Mr. Kincaid?"

"I see no other way out of it. Under the circumstances, we can't treat her like a common culprit; both her position and her sex would prevent."

"Very well, then; we seem to be agreed. We'll find suitable quarters for her--"

"I'll give her mine," put in Hendricks. "Correy will let me double up with him, I imagine."

"Sure," nodded Correy.

Kincaide glanced sharply at Hendricks, but said nothing. I knew, however, that he was thinking just what I was: that my young third officer was in for a bad, bad time of it.

Just how bad, I think neither of us guessed.

* * * * *

Liane became a member of the officers' mess on the Ertak. She occupied Hendricks' stateroom, and, I must confess, with uncommon good judgment for a woman, remained there most of the time.

She knew the reason for our mission, but this was one subject we never discussed. Nor did we mention the sect of which, according to the Chief of Command, she was the head. We did talk freely, when brought together at the table, on every other general topic.

Liane was an exceedingly intelligent conversationalist. Her voice was fascinating, and her remarks were always to the point. And she was a very good listener; she paid flattering attention to the most casual remark.
It seemed to me she was particularly gracious to Hendricks. Her strangely arresting blue eyes seldom left his face when he was speaking, and the greater portion of her remarks seemed addressed to him. Naturally, Hendricks responded as a flower responds to the warming rays of the sun.

"We'll do well, sir, to keep a weather eye on the youngster," opined Correy one morning. (I think I have previously explained that even in the unchanging darkness of space, we divided time arbitrarily into days and nights). "Unless I'm badly mistaken, Hendricks is falling victim to a pair of blue eyes."

"He's young," I shrugged. "We'll be there in two more days, and then we'll be rid of her."

"Yes," nodded Correy, "we'll be there in a couple of days. And we'll be rid of her, I hope. But--suppose it should be serious, sir?"

"What do you mean?" I asked sharply. I had been thinking, rather vaguely, along much the same lines, but to hear it put into words came as rather a shock.

"I hope I'm wrong," said Correy very gravely. "But this Liane is an unusual woman. When I was his age, I could have slipped rather badly myself. Her eyes--that slow smile--they do things to a man.

"At the same time, Liane is supposed to be the head of the thing we're to stamp out; you might say the enemy's leader. And it wouldn't be a good thing, sir, to have a--a friend of the enemy on board the Ertak, would it?"

A rebuke rose to my lips, but I checked it. After all, Correy had no more than put into words some fears which had been harassing me.

* * * * *

A traitor--in the Service? Perhaps you won't be able to understand just what that thought meant to those of us who wore the Blue and Silver in those days. But a traitor was something we had never had. It was almost unbelievable that such a thing would ever happen; that it could ever happen. And yet older men than Hendricks had thrown honor aside at the insistence of women less fascinating than Liane.

I had felt the lure of her personality; there was not one of us on board the Ertak who had not. And she had not exercised her wiles on any of us save Hendricks; with the shrewdness which had made her the leader she was, she had elected to fascinate the youngest, the weakest, the most impressionable.

"I'll have a talk with him, Mr. Correy," I said quietly. "Probably it isn't necessary; I trust him implicitly, as I am sure you do, and the rest of us."

"Certainly, sir," Correy replied hastily, evidently relieved by the manner in which I had taken his remarks. "Only, he's very young, sir, and Liane is a very fascinating creature."

I kept my promise to Correy the next time Hendricks was on watch.

"We'll be setting down in a couple of days," I commented casually. "It'll be good to stretch our legs again, won't it?"

"It certainly will, sir."

"And I imagine that's the last we'll see of our fair stowaway," I said, watching him closely.

Hendricks' face flushed and then drained white. With the tip of his forefinger he traced meaningless geometrical patterns on the surface of the instrument table.

"I imagine so, sir," he replied in a choked voice. And then, suddenly, in a voice which shook with released emotion. "Oh, I know what you're thinking!" he added. "What you've all been thinking; you, sir, and Correy and Kincaide. Probably the men, too, for that matter.

"But it's not so! I want you to believe that, sir. I may be impressionable, and certainly she is beautiful and--and terribly fascinating; but I'm not quite a fool. I realize she's on the other side; that I can't, that I must not, permit myself to care. You--you do believe that, sir?"

"Of course, lad!" I put my hand reassuringly on his shoulder; his whole body was shaking. "Forget it; forget her as soon as you can. None of us have doubted you for an instant; we just--wondered."

"I could see that; I could feel it. And it hurt," said my junior officer with shame-faced hesitancy. "But I'll forget her--after she's gone."

I let it go at that. After all, it was a rather painful subject for us both. The next day it did seem that he treated her with less attention; and she noticed it, for I saw the faint shadow of a frown form between her perfect brows, and her glance traveled meditatively from Hendricks' flushed face to my own.

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The next morning, after the first meal of the day, she walked down the passage with me, one slim white hand placed gently within the curve of my arm.

"Mr. Hendricks," she commented softly, "seems rather distraught the last day or so."

"Yes?" I said, smiling to myself, and wondering what was coming next.

"Yes, Commander Hanson." There was just the faintest suggestion of steeliness in her voice now. "I fancy you've been giving him good advice, and painting me in lurid colors. Do you really think so badly of me?" Her hand
pressed my arm with warm friendliness; her great blue eyes were watching me with beseeching interest.

"I think, Liane," I replied, "that Mr. Hendricks is a very young man."

"And that I am a dangerous woman?" She laughed softly.

"That, at least," I told her, "your interests and ours are not identical."

"True," she said coolly, pausing before the door of her stateroom. Her hand dropped from my arm, and she drew herself up regally. In the bright flow of the ethon tubes overhead she was almost irresistibly beautiful. "Our interests are not identical, Commander Hanson. They are widely divergent, directly opposed to each other, as a matter of fact. And--may I be so bold as to offer you a bit of advice?"

I bowed, saying nothing.

"Then, don't attempt to meddle with things which are more powerful, than you and the forces you control. And--don't waste breath on Mr. Hendricks. Fair warning!"

Before I could ask for more complete explanation, she had slipped inside her stateroom and firmly closed the door.

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We set down on Lakos late that afternoon, close to the city--town, rather--of Gio, where those in charge of operations made their headquarters. With Liane and Correy, leaving the ship in charge of Kincaide, I made my way quickly toward the headquarters building.

We had gone but a few steps when Liane was surrounded by a shouting throng of her fellow Lakonians, and with a little mocking wave of a white hand, she stepped into a sort of litter which had been rushed to the scene, and was carried away.

"For one," commented Correy with a sigh of relief, "I'm glad she's out of sight. If I never see her again, it'll be too soon. When do we start something?"

"Not until we've talked with Fetter, who's in command here. I have a letter for him from the Chief. We'll see what he has to say."

One thing was certain; we could look for no assistance of any kind from the natives. They regarded us with bleak scowls, from beneath shaggy, lowering brows, our uniforms of blue, with the silver ornaments of our service and rank, identifying us clearly.

In the greenish Lakonian twilight, they were sinister figures indeed, clothed all alike in short, sleeveless tunics, belted loosely at the waist, feet and legs encased in leather buskins reaching nearly to the knees, their brown, gnarled limbs and stoop-shouldered postures giving them a half-bestial resemblance which was disturbing. Their walk was a sort of slow shuffle, which made their long arms dangle, swinging disjointedly.

We entered the administration building of gray, dull stone, and were ushered immediately into the office of the head of operations.

"Hanson?" he greeted me. "Mighty glad to see you. You too, Correy. Terrible hole, this; hope you're not here for long. Sorry I couldn't meet you at the ship; got your radio, but couldn't make it. Everything's in a jam. Getting worse all the time. And we're shorthanded; not half enough men here. Sit down, sit down. Seem good to feel firm ground under your feet?"

"Not particularly; your air here isn't as good as the Ertak's." Correy and I seated ourselves across the desk from the garrulous Fetter. "I've a letter here from the Chief; I believe it explains why we're here."

"I can guess, I can guess. And none too soon. Things are in terrible shape. Terrible." Fetter ripped open the letter and glanced through it with harried eyes.

"Right," he nodded. "I'm to help you all I can. Place myself at your disposal. What can I do?"

"Tell us what's up," I suggested.

"That would be a long story. I suppose you know something about the situation already. Several reports have gone in to Base. What did the Chief tell you, Hanson?"

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Briefly, I sketched the Chief's report, Fetter nodding every few words. When I had finished, he rubbed his long, thin fingers together nervously, and stared down, frowning at the littered top of his desk.

"Right as far as he went," he said. "But he didn't go far enough. Wanted you to find out for yourself, I suppose."

"Well, there is a secret society working against us here. Sect, I'd call it. Undermined the whole inhabited portion of Lakos--which isn't a great area, as you know."

"The Chief Priestess is Liane. I believe you said she stowed away on the Ertak with you?"

I nodded.

"You're keeping her under guard?" asked Fetter.

"No; under the circumstances, we couldn't. We had no authority, you see. A crowd of natives bore her away in triumph."
"Then your work's cut out for you," groaned Fetter. "She's a devil incarnate. Beautiful, irresistible, and evil as corruption itself. If she's back, I'm afraid there's nothing to be done. We've been sitting on a volcano ever since she left. Pressure growing greater every instant, it seemed. She's just what's needed to set it off."

"We'll have to take our chances," I commented. "And now; just what is the set-up?"

"The Worshippers of the Flame, they call themselves. The membership takes in about every male being on Lakos. They meet in the great caverns which honeycomb the continent. Ghastly places; I've seen some of the smaller ones. Continent was thrust up from the sea in a molten state, some scientific chap told me once; these caverns were made by great belches of escaping steam or gas. You'll see them.

"She--Liane--and her priests rule solely by terror. The Lakonians are naturally just horses" (a draft animal of ancient Earth, now extinct), "content to work without thinking. Liane and her crew have made them think--just enough to be dangerous. Just what she tells them to think, and no more. Disobedient ones are punished by death. Rather a terrible death, I gather.

"Well, her chief aim is to stop the production of temite. She wishes to bargain with the Council--at her own terms."

"What's her price?" I asked. "What does she want, wealth?"

"No. Power!" Fetter leaned forward across the desk, hammering it with both fists to emphasize the word, his eyes gleaming from their deep sockets. "Power, Hanson, that's what she craves. She's insane on the subject. Utterly mad. She lusts after it. You asked her price; it's this: a seat in the Council!"

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I gasped audibly. A seat in the Council! The Council, composed of the wisest heads of the universe, and ruling the universe with absolute authority!

"She is mad," I said.


Fetter nodded solemnly.

"Mad--crazy--use your own terms," he said. "But that's her price. The Chief didn't tell you that, did he? Well, perhaps he didn't know. I learned it in a very roundabout way. She'll make the formal demand when the time is ripe, never fear. And what's more, unless these Worshippers of the Flame are stamped out--she'll get what she demands!"

"Impossible!"

"Not at all. You know what this place is. Only a Lakonian can stand this atmosphere long. No vitality to the light that does come through this damned green stuff they breathe for air; and after a few days, the acid, metallic tang of it drives you frantic. Never can get used to it.

"So the Lakonians have to mine the temite. And the universe must have temite, in quantities that can't be supplied from any other source. If the Lakonians won't mine it--and they won't, when Liane tells them to quit--what will the Council and your Service do about it?"

"Plenty," growled Correy.

"Nothing," contradicted Fetter. "You can kill a man, disintegrate him, imprison him, punish him, as you will, but you can't make him work." And there that phase of the matter rested.

I asked him a number of questions which I felt would help us to start our work properly, and he answered every one of them promptly and fully. Evidently, Fetter had given his problem a great deal of thought, and had done more than a little intelligent investigating of his own.

"If there's anything else I can do to help you," he said as he accompanied us to the door, "don't fail to call upon me. And remember what I said: trust no one except yourselves. Study each move before you make it. These Lakonians are dull-witted, but they'll do whatever Liane tells them. And she thinks fast and cunningly!"

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We thanked him for his warning, and hurried back to the ship through the sickly-green Lakonian dusk. The acrid odor of the atmosphere was already beginning to be disagreeable.

"Decent sort of a chap, Fetter," commented Correy. "All wrought up, isn't he? Worried stiff."

"I imagine he has cause to be. And--he might have been right in saying we should have held Liane: perhaps we could have treated with her in some way."

"No chance! Not that lady. When we treat with her, we'll have to have the whip hand, utterly and completely."

The heavy outer door of the Ertak's exit was open, but the transparent inner door, provided for just such an emergency, was in place, forming, in conjunction with a second door, an efficient air-lock. The guard saw us coming and, as we came up, had the inner door smartly opened, standing at salute as we entered. We returned his salute and went up to the navigating room, where I proposed to hold a brief council of war, informing Kincaide and Hendricks of what we had learned from Fetter, and deciding upon a course of action for the following day. Kincaide, whom I had left on watch, was there waiting.
"Well, sir, how do things stack up?" he asked anxiously.
"Not so good. Please ask Mr. Hendricks to report here at once, and I'll give you the whole story."

Kincaide pressed the attention signal to Hendricks' room, and waited impatiently for a response. There was none.
"Try my room," suggested Correy. "Maybe he hasn't moved back to his own quarters yet."
"That's what he said he would be doing," replied Kincaide. But that signal too failed to bring any response.

Correy glanced at me, a queer, hurt expression in his eyes.
"Shall I go forward and see if he--if he's ill?" he asked quickly.
"Please do," I said, and as soon as he was gone I turned to the microphone and called the sentry on duty at the exit.

"Commander Hanson speaking. Has Mr. Hendricks left the ship?"
"Yes, sir. Some time ago. The lady came back, saying she had word from you; she and Mr. Hendricks left a few minutes later. That was all right, sir?"
"Yes," I said, barely able to force the word from between my lips. Hendricks ... and Liane? Hendricks ... a traitor? I cut the microphone and glanced at Kincaide. He must have read the facts in my eyes.
"He's ... gone, sir?"
"With Liane," I nodded.

The door burst open, and Correy came racing into the room.
"He's not there, sir!" he snapped. "But in his room I found this!"

He held out an envelope, addressed to me. I ripped it open, glanced through the hasty, nervous scrawl, and then read it aloud:

"Sir:
I am leaving with Liane. I am sorry. It had to be.
Hendricks."

"That, gentlemen," I said hoarsely, after a long silence, "will make the blackest entry ever spread upon the log of the Ertak--upon any ship of the Service. Let us dismiss this thing from our minds, and proceed."

But that was easier, by far, to propose than to accomplish.

It was late indeed when we finished our deliberations, but the plan decided upon was exceedingly simple. We would simply enforce our authority until we located definite resistance; we would then concentrate our efforts upon isolating the source of this resistance and overcoming it. That we would find Liane at the bottom of our difficulties, we knew perfectly well, but we desired to place her in a definite position as an enemy. So far, we had nothing against her, no proof of her activities, save the rather guarded report of the Chief, and the evidence given us by Fetter.

There were three major continents on Lakos, but only one of them was inhabited or habitable, the other two being within the large northern polar cap. The activities of The Worshipers of the Flame were centered about the chief city of Gio, Fetter had told us, and therefore we were in position to start action without delay.

Force of men would avail us nothing, since the entire crew of the Ertak would be but a pitiful force compared to the horde Liane could muster. Our mission could be accomplished--if, indeed, it could be accomplished at all--by the force of whatever authority our position commanded, and the outwitting of Liane.

Accordingly, it was decided that, in the emergency, all three of us would undertake the task, leaving the ship in charge of Sub-officer Scholey, chief of the operating room crew, and a very capable, level-headed man. I gave him his final instructions as we left the ship, early the next morning:
"Scholey, we are leaving you in a position of unusual responsibility. An emergency makes it necessary, or at least desirable, for Mr. Correy, Mr. Kincaide and myself to leave the ship. Mr. Hendricks has already departed; therefore, the Ertak will be left in your charge.

"Remain here for five days; if we do not return in that time, leave for Base, and report the circumstances there. The log will reveal full authority for your actions."

"Very well, sir!" He saluted, and we passed through the air-lock which protected the Ertak from the unpleasant atmosphere of Lakos, armed only with atomic pistols, and carrying condensed rations and menores at our belts.

We went directly to the largest of the mines, the natives regarding us with furtive, unfriendly eyes. A great crowd of men were lounging around the mouth of the mine, and as we approached, they tightened their ranks, as though to block our passage.

"We'll bluff it through," I whispered. "They know the uniform of the Service, and they have no leader."
"I'd like to take a swing at one of them," growled Correy. "I don't like their looks--not a bit. But just as you say, sir."

Our bluff worked. We marched up to the packed mass as though we had not even noticed them, and slowly and unwillingly, they opened a path for us, closing in behind us with rather uncomfortable celerity. For a moment I regretted we had not taken a landing crew from the Ertak.

However, we won through the mouth of the mine without violence, but here a huge Lakonian who seemed to be in authority held up his hand and blocked our way.

"Let me handle him, sir," said Correy from the corner of his mouth. "I understand a little of their language."

"Right," I nodded. "Make it strong!"

Correy stepped forward, his head thrust out truculently, thumbs hooked through his belt, his right hand suggestively near his automatic pistol. He rapped out something in unpleasant gutturals, and the tall Lakonian replied volubly.

"He says it's orders," commented Correy over his shoulder. "Now I'll tell him who's giving orders around here!"

He stepped closer to the Lakonian, and spoke with emphatic briefness. The Lakonian fell back a step, hesitated, and started to reply. Correy stopped him with a single word, and motioned us to follow him. The guard watched us doubtfully, and angrily, but he let us pass.

"He told me," explained Correy, "that she had given orders. Didn't name her, but we can guess, all right. I told him that if she wished to say anything to us, she could do it in person; that we weren't afraid of her, of him, or all the Lakonians who ever breathed green soup and called it air. He's a simple soul, and easily impressed. So we got by."

"Nice work," I commended him. "It's an auspicious start, anyway."

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The mouth of the mine was not the usual vertical shaft; as Fetters had told us, it was a great ramp, of less than forty-five degrees, leading underground, illuminated by jets of greenish flame from metal brackets set into the wall at regular intervals, and fed by a never-failing interplay of natural gas. The passageway was of varying height and width, but nowhere less than three times my height from floor to ceiling, and it was broad enough at its narrowest so that ten men might have marched easily abreast.

The floor, apparently, had been smoothed by human effort, but for the rest, the corridor was, to judge from the evidence, entirely natural for the walls of shiny black rock bore no marks of tools.

At intervals, other passages branched off from the main one we were following, at greater and less angles, but these were much narrower, and had very apparently been hewn in the solid rock. Like the central passage, they were utterly deserted.

"We'll be coming out on the other side, pretty soon," commented Correy after a steady descent of perhaps twenty minutes. "This tunnel must go all the way through. I--what's that?"

We paused and listened. From behind us came a soft, whispering sound, the nature of which we could not determine.

"Sounds like the shuffle of many feet, far behind," suggested Kincaide gravely.

"Or, more likely, the air rushing around the corners of those smaller passages," I suggested. "This is a drafty hole. Or it may be just the combined flarings of all these jets of flame."

"Maybe you're right, sir," nodded Correy. "Anyway, we won't worry about it until we have to. I guess we just keep on going?"

"That seems to be about all there is to do; we should enter one of the big subterranean chambers Fetters mentioned, before long."

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As a matter of fact, it was but a minute or two later, that we turned a curve in the corridor and found ourselves looking into a vast open space, the roof supported by huge pillars of black stone, and the floor littered with rocky debris and mining tools thrown down by workmen.

"This is where they take out the temite ore, I imagine," said Kincaide, picking up a loose fragment of rock. He pointed to a smudge of soft, crumbly gray metal, greasy in appearance, showing on the surface of the specimen he had picked up. "That's the stuff, sir, that's causing us all this trouble: nearly pure metallic temite." He dropped the fragment, looking about curiously. "But where," he added, "are the miners?"

"I'm inclined to believe we'll find out before we get back to the Ertak," said Correy grimly. "Everything's moved along too sweetly; trouble's just piling up somewhere."

"That remains to be seen," I commented. "Let's move on, and see what's beyond. That looks like a door of some sort, on the far side. Perhaps it will lead us to something more interesting."

"I hope it does," growled Correy. "This underground business is getting on my nerves!"

It was a door I had seen, a huge slab of light yellow-green metal. I paused, my hand on the simple latch.
"Stand to one side," I said softly. "Let's see what happens."

I lifted the latch, and the heavy door opened inward. Cautiously, I stared through the portal. Inside was blackness and silence; somewhere, in the far distance, I could see two or three tiny pin-pricks of green light.

"We'll take a look around, anyway," I said. "Follow me carefully and be ready for action. It seems all right, but somehow, I don't like the looks of things."

In single file, we passed beyond the massive door, the light from the large room outside streaming ahead of us, our shadows long and grotesque, moving on the rocky floor ahead of us.

Then, suddenly, I became aware that the path of light ahead of us was narrowing. I turned swiftly; the door must be closing!

As I turned, lights roared up all around us, intense light which struck at our eyes with almost tangible force. A great shout rose, echoing, to a vaulted ceiling. Before we could move or cry out, a score of men on either side had pinioned us.

"Damnation!" roared Correy. "If I only had the use of my fists--just for a second!"

* * * * *

We were in a great cavern, the largest I have ever beheld. A huge bubble, blown in the molten rock by powerful gases from the seething interior of the world.

The roof was invisible above our heads, and the floor sloped down gently in every direction, toward a central dais, so far away that its details were lost to us. From the center of the dais a mighty pillar of green flame mounted into the air nearly twenty times the height of a man. All around the dais, seated on the sloping floor of the cavern, were Lakonians.

There were hundreds of them, thousands of them, and they were as silent and motionless as death. They paid no heed to us; they crouched, each in his place, and stared at the column of greenish flame.

"It was a trap," muttered Kincaide as our captors marched us rapidly toward the dais in the center of the huge amphitheater. "They were waiting for us; I imagine we have been watched all the time. And we walked into the trap exactly like a bunch of schoolboys."

"True--but we've found, I believe, what we wished to find," I told him. "This is the meeting place of the Worshipers of the Flame. There, I imagine is the Flame itself. And unless I'm badly mistaken, that's Liane waiting up there in the center!"

It was Liane. She was seated on a massive, simple throne of the greenish-yellow metal, the column of fire rising directly behind her like an impossible plume. In a semicircle at her feet, in massive chairs made of the odd metal, were perhaps twenty old men, their heads crowned with great, unkempt manes of white hair.

And standing beside Liane's throne, at her right hand, was--Hendricks!

* * * * *

His shoulders drooped, his chin rested upon his breast. He was wearing, not the blue-and-silver uniform of the Service, but a simple tunic of pale green, with buskins of dark green leather, laced with black. He did not look up as we were ushered before this impressive group, but Liane watched us with smiling interest.

Liane, seated there upon her throne, was not the Liane of those days in the Ertak. There, she had been scarcely more than a peculiarly fascinating young woman with a regal bearing and commanding eyes. Here, she was a goddess, terrifyingly beautiful, smiling with her lips, yet holding the power of death in the white hands which hung gracefully from the massive arms of the throne.

She wore a simple garment of thin, shimmering stuff, diaphanous as finest silk. It was black, caught at one shoulder with a flashing green stone. The other shoulder was bared, and the black garment was a perfect foil for the whiteness of her perfect skin, her amazing blue eyes, and the pale gold of her hair.

She lifted one hand in a slight gesture as our conductors paused before the dais; they fell away and formed a close cordon behind us.

"We have awaited your coming," she said in her sibilant voice. "And you are here."

"We are here," I said sternly, "representing, through our Service, the Supreme Council of the universe. What word shall we take back to those who sent us?"

Liane smiled, a slow, cruel smile. The pink fingers of one hand tapped gently on the carven arm of her throne. The eyes of the semicircle of old men watched us with unwavering hatred.

"The word you carry will be a good word," she said slowly. "Liane has decided to be gracious--and yet it is well that you have full understanding of Liane's power. For while the word Liane shall give you to bear back is a good word, still, Liane is but a woman, and women have been known to change their minds. Is that not so, Commander Hanson?"

"That is so, Liane," I nodded. "And we are glad to hear that your wisdom has led you to be gracious."

She leaned forward suddenly, her eyes flashing with anger.
"Mark you, it is not wisdom but a whim of mine which causes me to be graciously minded!" she cried. "Think you that Liane is afraid? Look about you!"

* * * * *

We turned slowly and cast our eyes about that great gathering. As far as the eye could reach, in every direction, was a sea of faces. And as we looked, the door through which we had entered this great hall was flung open, and a crowd of tiny specks came surging in.

"And still they come, at Liane's command," she laughed. "They are those who played, to disarm your suspicions, at blocking your entry to this place. They did but follow you, a safe distance behind."

"I thought so," murmured Correy. "Things were going too smoothly. That was what we heard, sir."

I nodded, and looked up at Liane.

"You have many followers," I said. "Yet this is but a small world, and behind the Council are all the worlds of the universe."

Liane threw back her head and laughed, a soft, tinkling sound that rose clearly above the hollow roar of the mighty flame behind her throne.

"You speak bravely," she said, "knowing that Liane holds the upper hand. Did your Council take armed action against us, we would blow up these caverns which are the source of your precious temite, and bury it so deeply no force that could live here could extract it in the quantities in which the universe needs it."

"But enough of this exchange of sharp words. Liane has already said that she is disposed to be gracious. Does that not content you?"

"I will bear back to those who sent me whatever word you have to offer; it is not for me to judge its graciousness," I said coolly.

"Then--but first, let me show you how well I rule here," she said. She spoke to one of the old men seated at her feet; he arose and disappeared in a passage leading from directly beneath the dais.

"You will see, presently, the punishment of Liane," she said smilingly. "Liane, Chief Priestess of the Flame, Mother of Life, Giver of Death, Most Worshiped of the Worshipers.

"Perhaps you wonder how it came that Liane sits here in judgment upon a whole people? Let me tell you, while we await the execution of Liane's judgment.

"The father of Liane, and his father before him, back unto those remote days of which we have no knowledge, were Chief Priests of the Worshipers of the Flame. But they were lacking in ambition, in knowledge, and in power. Their followers were but few, and their hands were held out in benediction and not in command.

"But the father of Liane had no son; instead he had a daughter, in whom was all the wisdom of those who had been the Chief Priests. She gathered about her a group of old men, shrewd and cunning, the lesser priests and those who would know the feel of power, who were not priests. You see them here at the feet of Liane.

"And under Liane's guidance, the ranks of the Worshipers grew, and as this power grew, so grew the power of Liane, until the time came when no man, no woman, on the face of Lakos, dared question the command of the Chief Priestess. And those who would have rebelled, were made to feel the power of Liane--as these you see here now."

* * * * *

The old man had reappeared, and behind him were two miserable wretches, closely guarded by a dozen armed men. Liane spoke briefly to the old man, and then turned to us.

"The first of these is one who has dared to disobey," she explained. "He brought out more of the ore than Liane had ordered. Do you hear the multitude? They know already what his fate will be."

A long, shuddering whisper had arisen from the thousands of beings crouched there in the amphitheater, as the uncouth figure of the prisoner was led up a flight of steep, narrow steps to the very base of the flame.

Hendricks, still hiding his face from us, bent over Liane and whispered something in her ear; she caressed his arm softly, and shook her head. Hendricks leaned more heavily against the throne, shuddering.

Slowly, the flame was dying, until we could see that it was not a solid pillar of fire, but a hollow circle of flame, fed by innumerable jets set at the base of a circle of a trifle more than the length of a man across.

Into those deadly circles the condemned man was led. His legs were bound swiftly, so that he could not move, and the old man stepped back quickly.

As though his movement had been a signal, the flames shot up with a roar, until they lost themselves far over our heads. As one man, the three of us started forward, but the guards hemmed us in instantly.

"Fools!" cried Liane. "Be still! The power of Liane is absolute here."

We stared, fascinated, at the terrible sight. The flame spouted, streaks of blue and yellow streaking up from its base. Mercifully, we could not see within that encircling wall of fire.

* * * * *

Slowly, the flame died down again. A trap-door opened in the circle, and some formless thing dropped out of
sight. Liane questioned the old man again, her eyes resting upon the other prisoner. The old man answered briefly.

"This one spoke against the power of Liane," she explained smilingly. "He said Liane was cruel; that she was
selfish. He also must feel the embrace of the sacred Flame."

I heard, rather than saw, the ghastly drama repeated, for I had bent my head, and would not look up. Liane was
no woman; she was a fiend. And yet for her a trusted officer, a friend, had forswn his service and his comrades. I
wondered, as I stood there with bowed head, what were the thoughts which must have been passing through
Hendricks' mind.

"You fear to look upon the punishment of Liane?" the voice of the unholy priestess broke in upon my
shuddering reverie. "Then you understand why her power is absolute; why she is Mother of Life, and Giver of
Death, throughout all Lakos. And now for the word I promised you, a gracious word from one who could be terrible
and not gracious, were that her whim.

"It has been in the mind of Liane to extend her power, to make for herself a place in this Supreme Council of
which you speak with so much awe and reverence, Commander Hanson. But, by happenchance, another whim has
seized her."

* * * * *

Liane looked up at Hendricks, smilingly, and took one of his hands in hers. It was wonderful how her face
softened as he returned, fiercely, the pressure of her soft hands.

"I know it will sound strange to your ears," she said in a voice almost tender, "but Liane is, after all, a woman,
with many, if not all, a woman's many weaknesses. And while even in his presence Liane will say that her lover was
at the beginning looked upon as no more than a tool which might further Liane's power, he has won now a place in
her heart."

I saw Hendricks tremble as she admitted her love, and that portion of his face which we could see flushed
hotly.

"And so, Liane has elected to give up, at least for the present, the place in the Council which she could
command. For after all, that would be a remote power, lacking in the elements of physical power which Liane has
over these, her people, and in which she has learned to delight.

"So, Commander Hanson, bear to your superiors this word: Liane will permit a production of whatever
reasonable amount of temite is desired. She will remain here with her consort, brooking no interference, no changes,
no commands from any person or organization. Go, now, and take with you the words of Liane!"

I looked up at her gravely, and shook my head.

"We shall go," I said, "and we shall take with us your words. But I warn you that the words you have spoken
are treason to the universe, in that you have defied the Council!"

Liane leaped from her throne, her scarlet lips drawn back against her white and gleaming teeth. Her eyes,
dilated with anger, blazed down upon us almost as hotly as the flame which rose behind her.

"Go! And quickly!" she fairly screamed. "If you have no desire to feel the embrace of the sacred Flame, then
go!"

I bowed silently, and motioned to Correy and Kincaide. Swiftly, we made our way down a long aisle,
surrounded by motionless figures staring unwinkingly at the column of fire, toward the door by which we had
entered this great chamber.

Behind us, I could hear Liane's clear voice lifted in her own guttural language, as she addressed the multitude.

* * * * *

Safely within the Ertak, we discussed the morning's adventure over a late luncheon.

"I suppose," said Kincaide, "there's nothing left to do but tell Fetter as much as seems wise, to reassure him,
and then return to Base to make our report."

"We'll come back, if we do," growled Correy. "And we'll come back to fight. The Council won't stand for her
attitude."

"Undoubtedly that's true," I admitted. "Still, I believe we should put it up to Base, and through Base to the
Council, before doing anything more. Much, if not all, of what she said was perfectly true."

"It was that," nodded Kincaide. "There were scores, if not hundreds of doors leading into that big chamber; I
imagine it can be reached, underground, from any point on the continent. And those winding passages would be
simple to defend from any form of invasion."

"But could these Lakonians fight?" asked Correy. "That's what I'd like to know. I doubt it. They look like a
sleepy, ignorant lot."

"I think they'd fight, to the death, if Liane ordered them to," I replied thoughtfully. "Did you notice the way
they stared at the flame, never moving, never even winking? My idea is that it exercises a sort of auto-hypnotic
influence over them, which gives Liane just the right opportunity to impress her will upon them."
"I wondered about that," Kincaide commented. "I believe you're right, sir. Any idea as to when we'll shove off?"

"There's no particular hurry; Fetter will be busy until evening, I imagine, so we won't bother him until then. As soon as we've had a chat with him, we can start."

"And without Hendricks," said Kincaide, shaking his head sadly. "I wonder--"

"If you don't mind, Mr. Kincaide, we won't mention his name on the Ertak after this," I interrupted. "I, for one, would rather forget him. Wouldn't you?"

"I would, sir, if I could," said Kincaide softly. "But that's not easy, is it?"

It wasn't easy. As a matter of fact, it was impossible. I knew I would never forget my picture of him, standing there shaken and miserable, beside the woman for whom he had disgraced his uniform, hiding his head in shame from the eyes of the men he had called comrades, and who had called him friend. But to talk of him was morbid.

* * * * *

It was late in the afternoon when I called Correy and Kincaide to the navigating room, where I had spent several hours charting our return course.

"I believe, gentlemen," I remarked, "that we can call on Mr. Fetter now. I'll ask you to remain in charge of the ship, Mr. Kincaide, while Mr. Correy and I--"

An attention signal sounded sharply to interrupt me. I answered it instantly.

"Sentry at exit, sir," said an excited voice. "Mr. Hendricks and the woman stowaway are here asking for you. They say it is very urgent."

"Bring them both here at once, under guard," I ordered. "Be sure you are properly relieved."

"Right, sir!"

I turned to Correy and Kincaide, who were watching me with curious eyes. My excitement must have shown upon my face.

"Mr. Hendricks and Liane are at the exit, asking to see me," I snapped. "They'll be here in a moment. What do you suppose is in the air?"

"Hendricks?" muttered Correy, his face darkening. "It seems to me he has a lot of nerve to--"

There was a sharp tap on the door.

"Come!" I ordered quickly. The door opened and Liane, followed by Hendricks, hurried into the room.

"That will do," I nodded to the guard who had accompanied them. "You may go."

"You wonder why we're here, I suppose?" demanded Liane. "I'll tell you, quickly, for every instant is precious."

This was a very different Liane. She was no longer clad in diaphanous black; she was wearing a tunic similar to the one she had worn on board the Ertak, save that this one was torn and soiled. Her lips, as she talked, twitched with an insane anger; her amazing eyes were like those of a cornered beast of the wilderness.

"My council of wise old men turned against me when I told them my plans to marry the man of my choice. They said he was an outsider, an enemy, a foreigner. They would have none of him. They demanded that I give him to the Flame, and marry one of my own kind. They had not, of course, understood what I had said to you there in the great chapel of the Flame.

"I defied them. We escaped through a passage which is not known to any save myself, and the existence of which my father taught me years ago. We are here, but they will guess where we have gone. My old men are exciting my people against me--and for that shall all, down to the last one, know the embrace of the Flame!" She gritted her teeth on the words, her nostrils distended with rage.

"I--I am safe. I can command them; I can make them know my power, and I shall. The Flame will have much to feed upon in the days which are to come, I promise you. But my beloved would not be safe; at this moment I cannot protect him. So I have brought him back. I--I know he ... but I will not be weak. I am Liane!"

* * * * *

She faced Hendricks, who had stood there like a graven image, watching her. Her arms went about his neck; her lips sought his.

"My beloved!" she whispered. "Liane was but a woman, after all. Darling! Good-by!" She kissed him again, and hurried to the door.

"One more thing!" she cried. "I must master them myself. I must show them I--I, Liane--am ruler here. You promise? You promise me you will not interfere; that you will do nothing?"

"But--"

Liane interrupted me before I could put my objections into words.

"Promise!" she commanded. "There are hundreds, thousands of them! You cannot slay them all--and if you did, there would be more. I can bend them to my will; they know my power. Promise, or there will be many deaths upon your hands!"
"I promise," I said. "And you—all of you?" she demanded, sweeping Correy and Kincaide with her eyes.
"Commander Hanson speaks for us all," nodded Kincaide.
With a last glance at Hendricks, whose eyes had never left her for an instant, she was gone.
Hendricks uttered a long, quivering sigh. His face, as he turned to us, was ghastly white.
"She's gone," he muttered. "Forever."
"That's exceedingly unfortunate, sir, for you," I replied crisply. "As soon as it's perfectly safe, we'll see to it that you depart also."

The sting of my words apparently did not touch him.
"You don't understand," he said dully. "I know what you think, and I do not blame you. She came back; you know that.
"'You are coming with me,' she said. 'I care for you. I want you. You are coming with me, at once.' I told her I was not; that I loved her, but that I could not, would not, go.
"She opened a port and showed me one of her countrymen, standing not far away, watching the ship. He held something in his hand.
"'He has one of your hand bombs,' she told me. 'I found it while I was hidden and took it with me when I left. If you do not come with me, he will throw it against the ship, destroy it, and those within it.'
"There was nothing else for me to do. She permitted me to explain no more than I did in the note I left. I pleaded with her; did all I could. Finally I persuaded her to give you the word she did, there before the great flame.
"She brought me back here at the risk of her own life, and, what is even more precious to her, her power. In--in her own way, she loves me...."

* * * * *

It was an amazing story; a second or two passed before any of us could speak. And then words came, fast and joyous; our friend, our trusted fellow-officer had come back to us! I felt as though a great black cloud had slid from across the sun.
And then, above our voices, rose a great mutter of sound. We glanced at one another, wonderingly. Hendricks was the first to make a move.
"That's the mob!" he said, darting toward the door. We followed him swiftly to the exit of the ship, through the air-lock, out into the open.
Hendricks had spoken the truth. Liane was walking, very slowly and deliberately, her head flung back proudly, toward the city. Coming toward her, like a great ragged wave, was a mighty mass of humanity, led by capering old men--undoubtedly the lesser priests, who had turned against her.
"The portable projectors, sir!" begged Correy excitedly. "A pair of them, and that mob--"
"We're bound by our promise," I reminded him. "She's not afraid; her power is terrible. I believe she'll win without them. Look!"
Liane had paused. She lifted one hand in a gesture of command, and called out to the rabble. Correy translated the whole thing for me later.
"Halt!" she cried sharply. "Who moves upon the Chief Priestess of the Flame earns the embrace of the Flame!"
The crowd halted, cowering; then the old man shouted to them and gestured them onward. With a rush, the front ranks came on.
"So!" Liane called out to them. "You would disobey Liane? Yet even yet it is not too late; Liane gives you one chance more. You little know the Chief Priestess of the Flame if you think she will tolerate an encroachment of her power. Back! Back, I say, or you all shall feel the might of Liane!"
Before her tirade the mob faltered, but again the crazed old men led them on. Liane turned, saw us, and made a regal gesture of farewell. From the bosom of her tunic she snatched a small black object, and swung it high above her head.
"The bomb!" shouted Hendricks. "She has it; she--"
At the very feet of the onrushing crowd the black object struck. There was a hollow roar; a blast of thundering air swept us backward to the ground.
When we scrambled to our feet, Liane was gone. The relentless mob had gone. Where they had been was a great crater of raw earth, strewn with ghastly fragments. Far back toward the city a few straggling figures ran frantically away from that scene of death.
"Gone!" I said. "Power was a mania, an obsession with her. Even her death was a supreme gesture--of power, of authority."
"Liane," Hendricks whispered. "Chief Priestess of the Flame ... Giver of Death...."
With Liane gone, and with her the old men who had tried to snatch her power from her hand, and who might
have caused us trouble, the rebellion of the Lakonians was at an end.
Leaderless, they were helpless, and I believe they were happy in the change. Sometimes the old ways are better
than the new, and Liane's régime had been merciless and rather terrible.
There are many kinds of women: great women, and women with small souls; women filled with the spirit of
sacrifice; selfish women, good women and bad.
And Liane? I leave her for you to judge. She was a woman; classify her for yourself.
After all, I am an old man, and perhaps I have forgotten the ways of women. I do not wish to judge, on one
hand to be called bitter and hard, on the other hand to be condemned as soft with advancing age.
I have given you the story of Liane, Chief Priestess of the Flame.
How, you clever and infallible members of this present generation, do you judge her?

Contents

OUT AROUND RIGEL

By Robert H. Wilson

The sun had dropped behind the Grimaldi plateau, although for a day twilight would linger over the Oceanus
Procularum. The sky was a hazy blue, and out over the deeper tinted waves the full Earth swung. All the long half-
month it had hung there above the horizon, its light dimmed by the sunshine, growing from a thin crescent to its full
disk three times as broad as that of the sun at setting. Now in the dusk it was a great silver lamp hanging over
Nardos, the Beautiful, the City Built on the Water. The light glimmered over the tall white towers, over the white
ten-mile-long adamantine bridge running from Nardos to the shore, and lit up the beach where we were standing,
with a brightness that seemed almost that of day.
"Once more, Garth," I said. "I'll get that trick yet."
The skin of my bare chest still smarted from the blow of his wooden fencing sword. If it had been the real two-
handed Lunarian dueling sword, with its terrible mass behind a curved razor edge, the blow would have produced a
cut deep into the bone. It was always the same, ever since Garth and I had fenced as boys with crooked laths. Back
to back, we could beat the whole school, but I never had a chance against him. Perhaps one time in ten--
"On guard!"
The silvered swords whirled in the Earth-light. I nicked him on one wrist, and had to duck to escape his wild
swing at my head. The wooden blades were now locked by the hilts above our heads. When he stepped back to get
free, I lunged and twisted his weapon. In a beautiful parabola, Garth's sword sailed out into the water, and he
dropped to the sand to nurse his right wrist.
"Confound your wrestling, Dunal. If you've broken my arm on the eve of my flight--"
"It's not even a sprain. Your wrists are weak. And I supposed you've always been considerate of me? Three
broken ribs!"
"For half a cent--"
* * * * *
He was on his feet, and then Kelvar came up and laid her hand on his shoulder. Until a few minutes before she
had been swimming in the surf, watching us. The Earth-light shimmered over her white skin, still faintly moist, and
blazed out in blue sparkles from the jewels of the breastplates and trunks she had put on.
When she touched Garth, and he smiled, I wanted to smash in his dark face and then take the beating I would
deserve. Yet, if she preferred him-- [TN-1]And the two of us had been friends before she was born. I put out my
hand.
"Whatever happens, Garth, we'll still be friends?"
"Whatever happens."
We clasped hands.
"Garth," Kelvar said, "it's getting dark. Show us your ship before you go."
"All right." He had always been like that--one minute in a black rage, the next perfectly agreeable. He now led
the way up to a cliff hanging over the sea.
"There," said Garth, "is the Comet. Our greatest step in conquering distance. After I've tried it out, we can go in
a year to the end of the universe. But, for a starter, how about a thousand light-years around Rigel in six months?"
His eyes were afire. Then he calmed down. "Anything I can show you?"

[Note: Editor's Note: The manuscript, of which a translation is here presented, was discovered by the rocket-ship expedition to the moon three years ago. It was found in its box by the last crumbling ruins of the great bridge mentioned in the narrative. Its final translation is a tribute at once to the philological skill of the Earth and to the marvelous dictionary provided by Dunal, the Lunarian. Stars and lunar localities will be given their traditional Earth names; and measures of time, weight, and distance have been reduced, in round numbers, to terrestrial equivalents. Of the space ship described, the Comet, no trace has been found. It must be buried under the rim of one of the hundreds of nearby Lunar craters—the result, as some astronomers have long suspected and as Dunal's story verifies, of a great swarm of meteors striking the unprotected, airless moon.]

* * * * *

I had seen the Comet before, but never so close. With a hull of shining helio-beryllium—the new light, inactive alloy of a metal and a gas—the ship was a cylinder about twenty feet long, by fifteen in diameter, while a pointed nose stretched five feet farther at each end. Fixed in each point was a telescopic lens, while there were windows along the sides and at the top—all made, Garth informed us, of another form of the alloy almost as strong as the opaque variety. Running half-way out each end were four "fins" which served to apply the power driving the craft. A light inside showed the interior to be a single room, ten feet high at the center of its cylindrical ceiling, with a level floor.

"How do you know this will be the bottom?" I asked, giving the vessel a shove to roll it over. But it would not budge. Garth laughed.

"Five hundred pounds of mercury and the disintegrators are under that floor, while out in space I have an auxiliary gravity engine to keep my feet there."

"You see, since your mathematical friends derived their identical formulas for gravity and electromagnetism, my job was pretty easy. As you know, a falling body follows the line of least resistance in a field of distortion of space caused by mass. I bend space into another such field by electromagnetic means, and the Comet flies down the track. Working the mercury disintegrators at full power, I can get an acceleration of two hundred miles per second, which will build up the speed at the midpoint of my trip to almost four thousand times that of light. Then I'll have to start slowing down, but at the average speed the journey will take only six months or so."

* * * * *

"But can anyone stand that acceleration?" Kelvar asked.

"I've had it on and felt nothing. With a rocket exhaust shoving the ship, it couldn't be done, but my gravitational field attracts the occupant of the Comet just as much as the vessel itself."

"You're sure," I interrupted, "that you have enough power to keep up the acceleration?"

"Easily. There's a two-thirds margin of safety."

"And you haven't considered that it may get harder to push? You know the increase of mass with velocity. You can't take one-half of the relativity theory without the other. And they've actually measured the increase of weight in an electron."

"The electron never knew it; it's all a matter of reference points. I can't follow the math, but I know that from the electron's standards it stayed exactly the same weight. Anything else is nonsense."

"Well, there may be a flaw in the reasoning, but as they've worked it out, nothing can go faster than light. As you approach that velocity, the mass keeps increasing, and with it the amount of energy required for a new increase in speed. At the speed of light, the mass would be infinite, and hence no finite energy could get you any further."

"Maybe so. It won't take long to find out."

A few of the brightest stars had begun to appear. We could just see the parallelogram of Orion, with red Betelguese at one corner, and across from it Rigel, scintillant like a blue diamond.

"See," Garth said, pointing at it. "Three months from now, that's where I'll be. The first man who dared to sail among the stars."

"Only because you don't let anyone else share the glory and the danger."

"Why should I? But you wouldn't go, anyway."

"Will you let me?"

I had him there.

"On your head be it. The Comet could hold three or four in a pinch, and I have plenty of provisions. If you really want to take the chance—"

"It won't be the first we've taken together."

"All right. We'll start in ten minutes." He went inside the ship.

* * * * *

"Don't go," Kelvar whispered, coming into the Comet's shadow. "Tell him anything, but don't go."
"I've got to. I can't go back on my word. He'd think I was afraid."
"Haven't you a right to be?"
"Garth is my friend and I'm going with him."
"All right. But I wish you wouldn't."
From inside came the throb of engines.
"Kelvar," I said, "you didn't worry when only Garth was going."
"No."
"And there's less danger with two to keep watch."
"I know, but still...."
"You are afraid for me?"
"I am afraid for you."
My arm slipped around her, there in the shadow.
"And when I come back, Kelvar, we'll be married?"
In answer, she kissed me. Then Garth was standing in the doorway of the Comet.
"Dunal, where are you?"
We separated and came out of the shadow. I went up the plank to the door, kicking it out behind me. Kelvar waved, and I called something or other to her. Then the door clanged shut. Seated before the control board at the front of the room, Garth held the switch for the two projectors.
"Both turned up," he yelled over the roar of the generators. His hands swung over and the noise died down, but nothing else seemed to have happened. I turned back again to look out the little window fixed in the door.

* * * * *

Down far below, I could see for a moment the city of Nardos with its great white bridge, and a spot that might be Kelvar. Then there was only the ocean, sparkling in the Earth-light, growing smaller, smaller. And then we had shot out of the atmosphere into the glare of the sun and a thousand stars.

On and up we went, until the moon was a crescent with stars around it. Then Garth threw the power forward.
"Might as well turn in," he told me. "There'll be nothing interesting until we get out of the solar system and I can put on real speed. I'll take the first trick."
"How long watches shall we stand?"
"Eighteen hours ought to match the way we have been living. If you have another preference--"
"No, that will be all right. And I suppose I might as well get in some sleep now."
I was not really sleepy, but only dazed a little by the adventure. I fixed some things on the floor by one of the windows and lay down, switching out the light. Through a top window the sunlight slanted down to fall around Garth, at his instrument board, in a bright glory. From my window I could see the Earth and the gleaming stars.

The Earth was smaller than I had ever seen it before. It seemed to be moving backward a little, and even more, to be changing phase. I closed my eyes, and when I opened them again, sleepily, the bright area was perceptibly smaller. If I could stay awake long enough, there would be only a crescent again. If I could stay awake--But I could not....

* * * * *

Only the rattling of dishes as Garth prepared breakfast brought me back to consciousness. I got to my feet sheepishly.
"How long have I slept?"
"Twenty hours straight. You looked as if you might have gone on forever. It's the lack of disturbance to indicate time. I got in a little myself, once we were out of the solar system."
A sandwich in one hand, I wandered over the vessel. It was reassuringly solid and concrete. And yet there was something lacking.
"Garth," I asked, "what's become of the sun?"
"I thought you'd want to know that." He led me to the rear telescope.
"But I don't see anything."
"You haven't caught on yet. See that bright yellowish star on the edge of the constellation Scorpio. That's it."
Involuntarily, I gasped. "Then--how far away are we?"
"I put on full acceleration fifteen hours ago, when we passed Neptune, and we have covered thirty billion miles--three hundred times as far as from the moon to the sun, but only one half of one per cent of a light-year."
I was speechless, and Garth led me back to the control board. He pointed out the acceleration control, now turned up to its last notch forward; he also showed me the dials which were used to change our direction.
"Just keep that star on the cross hairs. It's Pi Orionis, a little out of our course, but a good target since it is only twenty-five light-years away. Half the light is deflected on this screen, with a delicate photo-electric cell at its
center. The instant the light of the star slips off it, a relay is started which lights a red lamp here, and in a minute sounds a warning bell. That indicator over there shows our approach to any body. It works by the interaction of the object's gravitational field with that of my projector, and we can spot anything sizable an hour away. Sure you've got everything?"

* * * * *

It all seemed clear. Then I noticed at the top three clock-like dials; one to read days, another to record the speeds of light, and the third to mark light-years traveled.

"These can't really work?" I said. "We have no way to check our speed with outer space."

"Not directly. This is geared with clockwork to represent an estimate based on the acceleration. If your theory is right, then the dials are all wrong."

"And how long do you expect to go ahead without knowing the truth?"

"Until we ought to be at Pi Orionis. At two weeks and twenty-five light-years by the dials, if we aren't there we'll start back. By your figuring, we shouldn't be yet one light-year on the way. Anything more?"

"No, I think I can manage it."

"Wake me if anything's wrong. And look out for dark stars." Then he had left me there at the controls. In five minutes he was asleep and the whole ship was in my hands.

* * * * *

For hours nothing happened. Without any control of mine, the ship went straight ahead. I could get up and walk about, with a weather eye on the board, and never was there the flash of a danger light. But I was unable to feel confident, and went back to look out through the glass.

The stars were incredibly bright and clear. Right ahead were Betelguese and Rigel, and the great nebula of Orion still beyond. There was no twinkling, but each star a bright, steady point of light. And if Garth's indicators were correct, we were moving toward them at a speed now seventy-five times that of light itself. If they were correct.... How could one know, before the long two weeks were over?

But before I could begin to think of any plan, my eye was caught by the red lamp flashing on the panel. I pressed the attention button before the alarm could ring, then started looking for the body we were in danger of striking. The position indicators pointed straight ahead, but I could see nothing. For ten minutes I peered through the telescope, and still no sign. The dials put the thing off a degree or so to the right now, but that was too close. In five more minutes I would swing straight up and give whatever it was a wide berth.

I looked out again. In the angle between the cross hairs, wasn't there a slight haze? In a moment it was clear. A comet, apparently, the two of us racing toward each other. Bigger it grew and bigger, hurtling forward. Would we hit?

The dials put it up a little and far off to the right, but it was still frightening. The other light had come on, too, and I saw that we had been pulled off our course by the comet's attraction. I threw the nose over, past on the other side for leeway, then straightened up as the side-distance dial gave a big jump away. Though the gaseous globe, tailless of course away from the sun, showed as big as the full Earth, the danger was past.

* * * * *

As I watched, the comet vanished from the field of the telescope. Five minutes, perhaps, with the red danger light flickering all the time. Then, with a ghastly flare through the right hand windows, it had passed us.

Garth sat straight up. "What happened?" he yelled.

"Just a comet. I got by all right."

He settled back, having been scarcely awake, and I turned to the board again. The danger light had gone out, but the direction indicator was burning. The near approach of the comet had thrown us off our course by several degrees. I straightened the ship up easily, and had only a little more difficulty in stopping a rocking motion. Then again the empty hours of watching, gazing into the stars.

Precisely at the end of eighteen hours, Garth awakened, as if the consummation of a certain number of internal processes had set off a little alarm clock in his brain. We were forty-one hours out, with a speed, according to the indicator, of one hundred and twenty-eight times that of light, and a total distance covered of slightly over one quarter of a light-year. A rather small stretch, compared to the 466 light-years we had to go. But when I went back for a look out of the rear telescope, the familiar stars seemed to have moved the least bit closer together, and the sun was no brighter than a great number of them.

I slept like a log, but awakened a little before my trick was due.

* * * * *

Exactly on schedule, fourteen days and some hours after we had started off, we passed Pi Orionis. For long there had been no doubt in my mind that, whatever the explanation, our acceleration was holding steady. In the last few hours the star swept up to the brilliance of the sun, then faded again until it was no brighter than Venus. Venus!
Our sun itself had been a mere dot in the rear telescope until the change in our course threw it out of the field of vision.

At sixty-five light-years, twenty-three days out, Beta Eridani was almost directly in our path for Rigel. Slightly less than a third of the distance to the midpoint, in over half the time. But our speed was still increasing 200 miles a second every second, almost four times the speed of light in an hour. Our watches went on with a not altogether disagreeable monotony.

There was no star to mark the middle of our journey. Only, toward the close of one of my watches, a blue light which I had never noticed came on beside the indicator dials, and I saw that we had covered 233 light-years, half the estimated distance to Rigel. The speed marker indicated 3975 times the speed of light. I wakened Garth.

"You could have done it yourself," he complained, sleepily, "but I suppose it's just as well."

He went over to the board and started warming up the rear gravity projector.

"We'll turn one off as the other goes on. Each take one control, and go a notch at a time." He began counting, "One, two, three ..."

On the twentieth count, my dial was down to zero, his up to maximum deceleration, and I pulled out my switch. Garth snapped sideways a lever on the indicators. Though nothing seemed to happen, I knew that the speed dial would creep backward, and the distance dial progress at a slower and slower rate. While I was trying to see the motion, Garth had gone back to bed. I turned again to the glass and looked out at Rigel, on the cross hairs, and Kappa Orionis, over to the left, and the great nebula reaching over a quarter of the view with its faint gaseous streamers.

* * * * *

And so we swept on through space, with Rigel a great blue glory ahead, and new stars, invisible at greater distances, flaring up in front of us and then fading into the background as we passed. For a long time we had been able to see that Rigel, as inferred from spectroscopic evidence, was a double star—a fainter, greener blue companion revolving with it around their common center of gravity. Beyond Kappa Orionis, three hundred light-years from the sun, the space between the two was quite evident. Beyond four hundred light-years, the brilliance of the vast star was so great that it dimmed all the other stars by comparison, and made the nebula seem a mere faint gauze. And yet even with this gradual change, our arrival was a surprise.

When he relieved me at my watch, Garth seemed dissatisfied with our progress. "It must be farther than they've figured. I'll stick at twenty-five times light speed, and slow down after we get there by taking an orbit."

"I'd have said it was nearer than the estimate," I tried to argue, but was too sleepy to remember my reasons. Propped up on one elbow, I looked around and out at the stars. There was a bright splash of light, I noticed, where the telescope concentrated the radiation of Rigel at one spot on the screen. I slept, and then Garth was shouting in my ear:

"We're there!"

I opened my eyes, blinked, and shut them again in the glare.

"I've gone around three or four times trying to slow down. We're there, and there's a planet to land on."

* * * * *

At last I could see. Out the window opposite me, Rigel was a blue-white disk half the size of the sun, but brighter, with the companion star a sort of faint reflection five or ten degrees to the side. And still beyond, as I shaded my eyes, I could see swimming in the black a speck with the unmistakable glow of reflected light.

With both gravity projectors in readiness, we pulled out of our orbit and straight across toward the planet, letting the attraction of Rigel fight against our still tremendous speed. For a while, the pull of the big star was almost overpowering. Then we got past, and into the gravitational field of the planet. We spiralled down around it, looking for a landing place and trying to match our speed with its rotational velocity.

From rather unreliable observations, the planet seemed a good deal smaller than the moon, and yet so dense as to have a greater gravitational attraction. The atmosphere was cloudless, and the surface a forbidding expanse of sand. The globe whirled at a rate that must give it a day of approximately five hours. We angled down, picking a spot just within the lighted area.

A landing was quite feasible. As we broke through the atmosphere, we could see that the sand, although blotched with dark patches here and there, was comparatively smooth. At one place there was a level outcropping of rock, and over this we hung. It was hard work, watching through the single small port in the floor as we settled down. Finally the view was too small to be of any use. I ran to the side window, only to find my eyes blinded by Rigel's blaze. Then we had landed, and almost at the same moment Rigel set. Half overlapped by the greater star, the faint companion had been hidden in its glare. Now, in the dusk, a corner of it hung ghostlike on the horizon, and then too had disappeared.

* * * * *
I flashed on our lights, while Garth cut out the projector and the floor gravity machine. The increase in weight was apparent, but not particularly unpleasant. After a few minutes of walking up and down I got used to it.

Through a stop-cock in the wall, Garth had drawn in a tube of gas from the atmosphere outside, and was analyzing it with a spectroscope.

"We can go out," he said. "It's unbreathable, but we'll be able to use the space suits. Mostly fluorine. It would eat your lungs out like that!"

"And the suits?"

"Fortunately, they've been covered with helio-beryllium paint, and the helmet glass is the same stuff. Not even that atmosphere can touch it. I suppose there can be no life on the place. With all this sand, it would have to be based on silicon instead of carbon--and it would have to breathe fluorine!"

He got out the suits--rather like a diver's with the body of metal-painted cloth, and the helmet of the metal itself. On the shoulders was an air supply cylinder. The helmets were fixed with radio, so we could have talked to each other even in airless space. We said almost anything to try it out.

"Glad you brought two, and we don't have to explore in shifts."

"Yes, I was prepared for emergencies."

"Shall we wait for daylight to go out?"

"I can't see why. And these outfits will probably feel better in the cool. Let's see."

* * * * *

We shot a searchlight beam out the window. There was a slight drop down from the rock where we rested, then the sandy plain stretching out. Only far off were those dark patches that looked like old seaweed on a dried-up ocean bed, and might prove dangerous footing. The rest seemed hard packed.

My heart was pounding as we went into the air-lock and fastened the inner door behind us.

"We go straight out now," Garth explained. "Coming back, it will be necessary to press this button and let the pump get rid of the poisonous air before going in."

I opened the outer door and started to step out, then realized that there was a five-foot drop to the ground.

"Go ahead and jump," Garth said. "There's a ladder inside I should have brought, but it would be too much trouble to go back through the lock for it. Either of us can jump eight feet at home, and we'll get back up somehow."

I jumped, failing to allow for the slightly greater gravity, and fell sprawling. Garth got down more successfully, in spite of a long package of some sort he carried in his hand.

Scrambling down from the cliff and walking out on the sand, I tried to get used to the combination of greater weight and the awkward suit. If I stepped very deliberately it was all right, but an attempt to run sank my feet in the sand and brought me up staggering. There was no trouble seeing through the glass of my helmet over wide angles.

Standing on the elevation by the Comet, his space-suit shining in the light from the windows, Garth looked like a metallic monster, some creature of this strange world. And I must have presented to him much the same appearance, silhouetted dark and forbidding against the stars.

* * * * *

The stars! I looked up, and beheld the most marvelous sight of the whole trip--the Great Nebula of Orion seen from a distance of less than one hundred and fifty light-years its own width.

A great luminous curtain, fifty degrees across, I could just take it all in with my eye. The central brilliancy as big as the sun, a smaller one above it, and then the whole mass of gas stretching over the sky. The whole thing aglow with the green light of nebulium and blazing with the stars behind it. It was stupendous, beyond words.

I started to call Garth, then saw that he was looking up as well. For almost half an hour I watched, as the edge of the nebula sank below the horizon. Then its light began to dim. Turning, I saw that the sky opposite was already gray. The dawn!

Why, the sun had just set. Then I realized. It was over an hour since we had landed, and a full night would be scarcely two hours and a half. If we were in a summer latitude, the shorter period of darkness was natural enough. And yet it was still hard to believe as, within ten minutes, it was as bright as Earth-light on the moon. Still clearer and clearer grew the light. The stars were almost gone, the center of the nebula only a faint wisp. There were no clouds to give the colors of sunrise, but a bluish-white radiance seemed to be trembling on the eastern horizon.

And then, like a shot, Rigel came up into the sky. The light and heat struck me like something solid, and I turned away. Even with my suit reflecting most of the light away, I felt noticeably warm. The Comet shone like a blinding mirror, so that it was almost impossible to see Garth on the plain below it. Stumbling, and shielding my eyes with my hand, I made my way toward him.

He was standing erect, in his hands two old Lunarian dueling swords. There was hate in his voice as the radio brought it in my ears.

"Dunal, only one of us is going back to the moon."
I stared. Was the heat getting him? "Hadn't we better go inside," I said quietly and somewhat soothingly.

He made no reply, but only held out one of the hilts. I took it dumbly. In that instant he could have struck my head from my body, if he wished.

"But, Garth, old friend--"

"No friend to you. You shall win Kelvar now, or I. I'm giving you a sporting chance. One of your light cuts letting the fluorine inside will be as deadly as anything I can do. The one who goes back will tell of an accident, making repairs out in space. Damn you, if you don't want me to kill you where you stand, come on and fight."

"Garth, you've gone mad."

"I've been waiting ever since I got you to leave the moon. On guard!"

With a rush of anger I was upon him. He tried to step back, stumbled, had one knee on the ground, then hurled himself forward with a thrust at my waist that I dodged only by an inch. I had to cover, and in spite of myself, with the cool work of parrying, my animosity began to disappear.

And so began one of the strangest battles that the Universe has seen. Lumbering with our suits and the extra gravity, we circled each other under the blazing sky. The blue-white of Rigel shimmered off our suits and the arcs of our blades as we cut and guarded--each wary now, realizing that a touch meant death. As that terrible sun climbed upward in the sky, its heat was almost overpowering. The sweat poured off every inch of my body, and I gasped for breath. And still we fought on, two glittering metal monsters under the big blue star sweeping up to its noon.

I knew now that I could never kill Garth. I could not go back to Kelvar with his blood. Yet if I simply defended, sooner or later he would wear me down. There was just one chance. If I could disarm him, I could wrestle him into submission. Then he might be reasonable, or I could take him home bound.

I began leading for the opening I wanted, but with no result. He seemed resolved to tire me out. Either I must carry the fight to him, or I would be beaten down. I made a wide opening, counting on dodging his slow stroke. I did, but he recovered too soon. Again on the other side, with no better result. Still again, just getting in for a light tap on Garth's helmet. Then I stepped back, with guard low, and this time he came on. His sword rose in a gleaming arc and hung high for a moment. I had him. There were sparks of clashing, locked steel.

"Damn you, Dunal!" He took a great step back, narrowly keeping his balance on the sand. On another chance, I would trip him. My ears were almost deafened by his roar, "Come on and fight."

I took a step in and to the side, and had him in the sun. He swung blindly, trying to cover himself with his whirling point but I had half a dozen openings to rip his suit. When he moved to try to see, I would lock with him again. I watched his feet.

And as I watched, I saw an incredible thing. Near one of Garth's feet the sand was moving. It was not a slide caused by his weight; rather--why, it was being pushed up from below. There was a little hump, and suddenly it had burst open, and a stringy mass like seaweed was crawling toward his leg.

"Look out, Garth," I yelled.

How he could see through that terrible sun I do not know, but Garth swung through my forgotten guard with a blow square across my helmet glass. The force threw me to the ground, and I looked up, dazed. The beryllium glass had not broken to let in the fluorine-filled air, but Garth was standing over me.

"That's your last trick, Dunal."

His blade rose for the kill.

I was unable even to get up, but with one hand I pointed to the ground.

"Look!" I shouted again, and on the instant the thing wound itself around Garth's foot.

He swung down, hacking it loose. I had got to my feet. "Run for the ship," I cried, and started off.

"Not that way."

I looked back, and saw that I had run in the wrong direction. But it made no difference. Over a whole circle around us the sand was rising, and directly between us and the Comet there was a great green-brown mass. We were surrounded.

We stood staring at the creatures. Spread out to full dimensions, each one made a sphere about four feet in diameter. In the center, a solid mass whose outlines were difficult to discern; and spreading out from this a hundred long, thin, many-jointed arms or legs or branches or whatever one could call them.

The things were not yet definitely hostile--only their circle, of perhaps fifty yards radius, grew continually thicker and more impenetrable. Within the enclosed area, the only ripples we could see in the sand were heading outward. There was to be no surprise attack from below, at least; only one in mass. What, I wondered, might be a sign of friendship, to persuade them to let us go.
And then the circle began to close in. The things rolled over and over on themselves, like gigantic tumbleweeds. At one point, to the right of the direct route to the Comet, the line seemed thinner. I pointed the place out to Garth.

"Break through there, and make a run for it."

We charged into the midst of them with swinging blades. The very suddenness of our rush carried us half-way through their midst. Then something had my legs from behind. I almost fell, but succeeded in turning and cutting myself free. The creatures from the other side of the circle must have made the hundred yards in four or five seconds. And the rest had now covered the breach in front. It was hopeless.

And so we stood back to back, hewing out a circle of protection against our enemies. They seemed to have no fear, and in spite of the destruction our blades worked among them, they almost overcame us by sheer numbers and weight. It was a case of whirling our swords back and forth interminably in the midst of their tentacles. Against the light, the long arms were a half-transparent brown. Our swords broke them in bright shivers. Formed from the predominant silicon of the planet, the creatures were living glass!

For perhaps a quarter of an hour we were in the thick of them, hewing until I thought my arms must fall, slashing and tearing at the ones that had got underfoot and were clamping their tentacles around our legs. Only for the space-suits, we should have, by this time, been overpowered and torn into bits—and yet these garments could not be expected to hold indefinitely.

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But at last there was a breathing space. The crippled front ranks dragged themselves away, and there was left around us a brief area of sand, covered with coruscating splinters of glass. Garth got the breath to say something or other encouraging. It was like old days at school.

Only this time the odds were all against us. We were still a good hundred yards from the Comet, and in our path stood a solid wall of the creatures. Even if we got free, they could outrace us to the goal. And with our limited strength, we could not hope to kill them all. In a minute or two, they would attack us again.

Somehow we must fight our way as long as we lasted. Perhaps they might be frightened. We threw ourselves at the side next our goal. The line gave perhaps a yard, then stiffened, and we found ourselves swallowed up in a thick cloud of brown smoke.

Poison gas! It must be shot out of their bodies, at a cost so great that it was kept as a last resort. Through the rolling vapor it was just possible to see our opponents, but they made no forward move. They were waiting for us to be overcome. Suppose their compound could eat through even our helio-beryllium? But it did not. We were safe.

"Stand still, Garth," I whispered, counting on the radio to carry my voice. "Let them think we're dead, and then give them a surprise."

"All right."

Long, long minutes.... If only they did not know that it was the customary thing for a dead man to fall.... Slowly they began to move in.

Then Garth and I were upon them. They halted as if stupefied. We had hacked our way half through their mass. The rest fled, and we began running toward the Comet, praying that we might reach the ship before they could get organized again. How we floundered through the sand in wild and desperate haste.

* * * * *

Before we had covered half the distance, the pursuit began. There was no attempt to drag us down directly, but the two wings raced past to cut us off in front. At the base of the little cliff where the Comet lay, the circle closed.

"Jump," I called, and threw myself up over them toward the stone. Garth would have fallen back, but I caught his hand and pulled him to safety. We had won.

But had we? Joined by reinforcements from somewhere, the creatures were packed all around the base of the cliff and had begun to climb its walls, to cut us off from the ship. We rushed separately toward the two sides, and they backed away. But those in front were now established on the top. We stepped backward, and the whole line came on. But now we turned and ran for the Comet.

We were just able to turn again and clear them away with our swords. In a moment others would be climbing up from behind over the ship. And the door to safety was on a level with our heads.

There was just one chance. Stamping threateningly, we cleared the things out for ten feet in front of us. But once we turned our backs for a running start they were at us again.

"Boost you up, Dunal," said Garth pantingly.

"No, you first."

But in the midst of my words, he almost threw me into the doorway. I turned to pull him up after me. They were around his legs, and one had jumped down upon his helmet. And he must have known it would happen.

"Go back to her," he cried, and slammed shut the door.
There was no time to help him, to interfere with the way of expiation he had chosen. I tried to look away, but a sort of fascination kept me watching him through the glass. He had been dragged to his knees. Then he was up again, whirling to keep them away on all sides in a mad, gallant fight. But the creatures knew it was the kill. Now they were around his knees, now up to his waist in their overpowering mass. It was only a matter of minutes.

Garth took a staggering step backward, dragging them all with him. He was facing me, and swung up his sword in the old Lunar salute. "Good luck, Dunal." The words, coming clearly over the radio, had a note of exaltation.

Then flashing his blade over his head, he hurled it into the midst of the accursed things. With a tremendous effort, Garth tore the protecting helmet from his head, and plunged backward over the cliff.

There was nothing to do but get in out of the lock and start for home, and little on the trip is worthy of recounting. Without unsurpassable difficulty, I was able to operate the machinery and steer, first for Betelguese, then for the sun. Counting on the warning bells to arouse me, I managed to get in snatches of sleep at odd intervals. At times the strain of the long watches was almost maddening.

By the time the midpoint had been passed, I was living in a sort of waking dream; or rather, a state of somnambulism. I ate; my hands moved the controls. And yet all the while my mind was wandering elsewhere--out to Garth's body under the blazing light of Rigel, back to the moon and Kelvar, or else in an unreal, shadowy world of dreams and vague memories.

With perfect mechanical accuracy I entered the solar system and adjusted the projectors for the sun's attraction. Running slower and slower, I watched Venus glide by. And then, gradually, everything faded, and I was walking along the great Nardos bridge with Kelvar. The ocean was so still that we could see mirrored in it the reflection of each white column, and our own faces peering down, and beyond that the stars.

"I shall bring you a handful for your hair," I told her, and leaned over farther, farther, reaching out.... Then I was falling, with Kelvar's face growing fainter, and in my ears a horrible ringing like the world coming to an end.

Just before I could strike the water, I wakened to find the alarm bell jangling and the object-indicator light flashing away. Through the telescope, the moon was large in the sky.

It was an hour, perhaps two, before I approached the sunlit surface and hovered over the shore by Nardos. Try as I would, my sleep-drugged body could not handle the controls delicately enough to get the Comet quite in step with the moon's rotation. Always a little too fast or too slow. I slid down until I was only ten or fifteen feet off the ground that seemed to be moving out from under me. In another minute I should be above the water. I let everything go, and the Comet fell. There was a thud, a sound of scraping over the sand, a list to one side. I thought for an instant that the vessel was going to turn over, but with the weight of the reserve mercury in the fuel tanks it managed to right itself on a slope of ten or fifteen degrees.

From the angle, I could barely see out the windows, and everything looked strange. The water under the bridge seemed too low. The half-full Earth had greenish-black spots on it. And the sky?

So dead with sleep that I could scarcely move, I managed to crane my neck around to see better. There was no sky, only a faint gray haze through which the stars shone. And yet the sun must be shining. I stretched still further. There the sun burned, and around it was an unmistakable corona. It was like airless space.

Was I dreaming again?

With a jerk, I got to my feet and climbed up the sloping floor to the atmosphere tester. My fingers slipped off the stop-cock, then turned it. And the air-pressure needle scarcely moved. It was true. Somehow, as the scientists had always told us would be the case eventually, the air of the moon, with so little gravity to hold it back, had evaporated into space.

But in six months? It was unthinkable. Surely someone had survived the catastrophe. Some people must have been able to keep themselves alive in caves where the last of the atmosphere would linger. Kelvar must be still alive. I could find her and bring her to the Comet. We would go to some other world.

Frantically, I pulled on my space-suit and clambered through the air-lock. I ran, until the cumbersome suit slowed me down to a staggering walk through the sand beside the Oceanus Procellarum.

Leaden and dull, the great sea lay undisturbed by the thin atmosphere still remaining. It had shrunk by evaporation far away from its banks, and where the water once had been there was a dark incrustation of impurities. On the land side, all was a great white plain of glittering alkali without a sign of vegetation. I went on toward Nardos the Beautiful.

Even from afar off, I could see that it was desolate. Visible now that the water had gone down, the pillars supporting it rose gaunt and skeletal. Towers had fallen in, and the gleaming white was dimmed. It was a city of the
dead, under an Earth leprous-looking with black spots where the clouds apparently had parted.

I came nearer to Nardos and the bridge, nearer to the spot where I had last seen Kelvar. Below the old water level, the columns showed a greenish stain, and half-way out the whole structure had fallen in a great gap. I reached the land terminus of the span, still glorious and almost beautiful in its ruins. Whole blocks of stone had fallen to the sand, and the adamantine pillars were cracked and crumbling with the erosion of ages.

Then I knew.

In our argument as to the possible speed of the Comet, Garth and I had both been right. In our reference frame, the vessel had put on an incredible velocity, and covered the nine-hundred-odd light-years around Rigel in six months. But from the viewpoint of the moon, it had been unable to attain a velocity greater than that of light. As the accelerating energy pressed the vessel's speed closer and closer toward that limiting velocity, the mass of the ship and of its contents had increased toward infinity. And trying to move laboriously with such vast mass, our clocks and bodies had been slowed down until to our leaden minds a year of moon time became equivalent to several hours.

The Comet had attained an average velocity of perhaps 175,000 miles per second, and the voyage that seemed to me six months had taken a thousand years. A thousand years! The words went ringing through my brain. Kelvar had been dead for a thousand years. I was alone in a world uninhabited for centuries.

I threw myself down and battered my head in the sand.

* * * * *

More to achieve, somehow, my own peace of mind, than in any hope of its being discovered, I have written this narrative. There are two copies, this to be placed in a helio-beryllium box at the terminus of the bridge, the other within the comet. One at least should thus be able to escape the meteors which, unimpeded by the thin atmosphere, have begun to strike everywhere, tearing up great craters in the explosion that follows as a result of the impact.

My time is nearly up. Air is still plentiful on the Comet, but my provisions will soon run short. It is now slightly over a month since I collapsed on the sands into merciful sleep, and I possess food and water for perhaps another. But why go on in my terrible loneliness?

Sometimes I waken from a dream in which they are all so near—Kelvar, Garth, all my old companions—and for a moment I cannot realize how far away they are. Beyond years and years. And I, trampling back and forth over the dust of our old life, staring across the waste, waiting—for what?

No, I shall wait only until the dark. When the sun drops over the Grimaldi plateau, I shall put my manuscripts in their safe places, then tear off my helmet and join the other two.

An hour ago, the bottom edge of the sun touched the horizon.
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