

SEPTEMBER, 1969

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Galaxy

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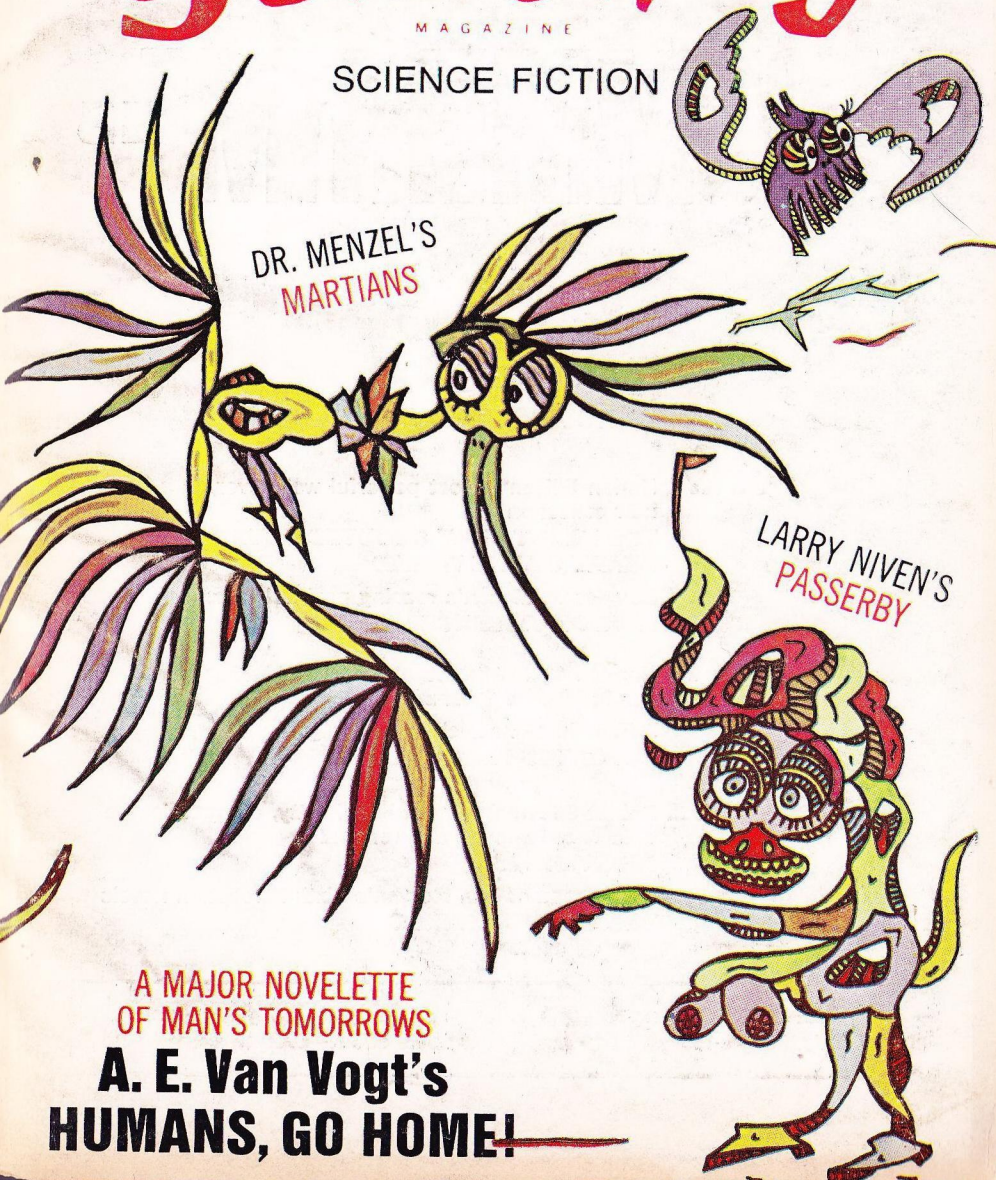
SCIENCE FICTION

DR. MENZEL'S
MARTIANS

LARRY NIVEN'S
PASSERBY

A MAJOR NOVELETTE
OF MAN'S TOMORROWS

**A. E. Van Vogt's
HUMANS, GO HOME!**



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Galaxy

MAGAZINE

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September, 1969 • Vol. 129 No. 1

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Cover: MENZEL'S MARTIANS

Unnatural Selection

ALL OF the Darwinian Theory is based on the doctrine of the survival of the fittest—fittest meaning, in this sense, the individual most likely to have offspring which in turn will survive long enough to have more offspring. Some organisms produce this fitness simply by laying so many tens of thousands of eggs that a lot of them hatch and survive. Others by developing organs or traits which make them fast, intelligent or dangerous to foes. As a theory, this one is elegant and highly productive—insofar as it relates to the past.

As to the future, however, there's not much hope for it.

There are three main reasons for thinking so. First of all, what used to be antisurvival traits no longer get weeded out—and, indeed, sometimes are selected *for*. (Witness the milk cow, which couldn't live a week in an environment containing large predators; witness the genes for various human weaknesses like nearsightedness and agammaglobulinemia, which used to be selected out and now are compensated for admirably by glasses or by drugs.) Secondly, some traits that used to be prosurvival (and still are, for the individual) are now distinctly deleterious to the species in general—witness the

prevailing population explosion.

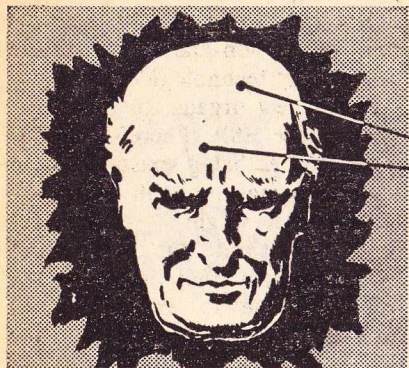
But the most interesting indication of a non-Darwinian future lies in the technological development of new organs for man.

Consider ESP. There's very little evidence that it exists between human beings, though many of us think it ought to and most of us wish it did. But there's good evidence now that it exists—or can be made to exist—between men and machines. It works like this. Put an EEG skullcap on your head, tracing the electrical currents in your brain and reading them out as waveforms on a cathode tube. Program a computer to scan those patterns and interpret them as commands: If they grow in amplitude or frequency they make the machine go faster. If they dwindle they make the machine go slower or turn it off. Practice consciously changing the shape of the waves as you see them on the tube—and with a little luck and a lot of practice, you can run the machine without normal sensory communication.

Is it really ESP?

Not in the traditional sense, to be sure. But still it is extrasensory, all right—and of course the machine does perceive.

The trouble with Darwinism is that it's too slow. It takes a million years or so to make a new species. Chances are technology can do it in a matter of decades. —FREDERIK POHL



STRANGE
things happen
here!

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DO YOU struggle for balance? Are you forever trying to maintain *energy, enthusiasm* and the *will to do?* Do your personality and power of accomplishment ebb and flow—like a stream controlled by some unseen valve? Deep within you are minute organisms. From their function spring your emotions. They govern your *creative ideas* and *moods*—yes, even your enjoyment of life. Once they were thought to be the mysterious seat of the soul—and to be left unexplored. Now cast aside superstition and learn to direct intelligently these *powers of self*.

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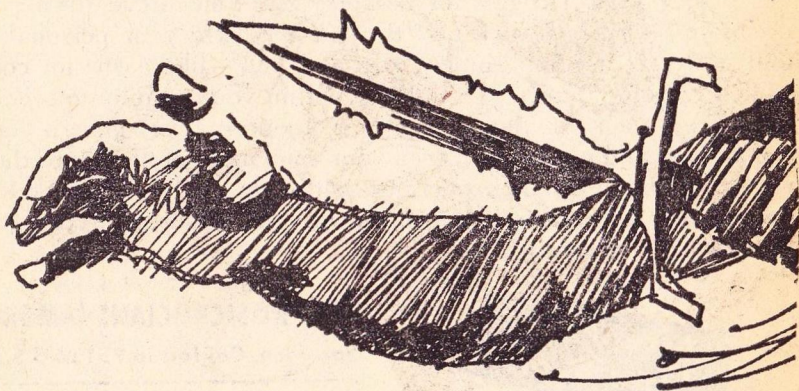
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HUMANS, GO HOME!

A. E. VAN VOGT



I

EACH morning," Miliss said, "is the dawn of nothing."

So she was leaving.

"No children, no future," the woman continued, "Every day like every other, going nowhere. The sun shines but I'm in darkness—"

It was, Dav realized, the begin-

ning of the death talk. He tensed his perfect muscles. His blue eyes—they could observe with a deep understanding on many levels—misted with sudden anxiety. But his lips and his infinitely adaptable tongue—which in its time, and that time was long indeed, had spoken a hundred languages—said no word.



His mission was to make a gift of humanity's past to beings of an alien planet—and discover: Could Man survive his own immortality?

He watched her, made no move to help her and no effort to stop her as she piled her clothes onto a powered dolly, to be wheeled into the east wing of the house. Her clothes, her jewels from a score of planets; her special pillows and other bedroom articles; the specific furniture—each piece a jewel in itself—in which

she stored her possessions; her keys—plain and electronic, push-button control types for energy relays and tiny combination systems for entry into the great Reservoir of the Symbols—all now were made ready to be transported with a visibly growing impatience.

Finally she snapped, "Where is

your courtesy? Where is your manliness—letting a woman do all this work?"

Dav said evenly, "It would be foolish of me to help you leave me."

"So all those years of politeness—I merely bought them with unalienated behavior. You have no natural respect for a woman—or for me."

She yelled accusations at him. Dav felt a tremor stir inside him, not from her words but from the meaning of the anger that accompanied them, the unthinking automatic quality of that anger.

He said flatly, "I am not going to help you leave me."

It was the kind of answer one made to a stereotype. His hope had to be that these preliminaries of the death compulsion could be headed off.

His words, however, were far from effective. Her blond cheeks gradually turned to a darker color as the day—unlike other days, which were often as slow as forever—devoured itself, digesting hours in great gulps. And still her possessions, more numerous evidently than she had realized, were not shifted from the west to the east wing of the long, big house.

Late in the afternoon Dav pointed out that her act of withdrawal was a well-known phenomenon of internal female chemistry. He merely wanted from her the analytical consciousness of this fact—and her permission to give her the drugs that would rectify the condition.

She rejected the argument. From her lips poured a stream of angry rationalizations.

"The woman is always to blame. The fault is in her, not in the man. The things that I have had to put up with—they don't count—"

Long ago, when she was still in her natural state, before the administration of the first immortality injections, there might have been genuine cause for accusations which attacked male subjectiveness. But that was back in a distant time. After the body had been given chemical aids all things were balanced by a diet of understanding drugs.

DAV located the relevant book in the library and abandoned his initial attempts to keep from her the seriousness of her condition. He walked beside her and read paragraphs detailing the emotional affliction that had led to the virtual destruction of the human race. The dark thoughts she had expressed—and was now acting on—were described so exactly that abruptly, as he walked beside her, he bent in her direction and held the book up to her face. His finger pointed out the significant sentences.

Miliss stopped. Her eyes, a deceptive gray-green, narrowed. Her lips tightly compressed, unmistakably resisting what he was doing. Yet she spoke in a mild tone.

"Let me see that."

She reached for the book.

Dav surrendered it reluctantly.

The sly purpose he detected in her seemed even more automatic than the earlier anger. In those few hours she appeared to have become a simpler, more primitive person.

So he was not surprised when she raised the book above her head and, with a wordless vocalization, flung it to the floor behind him.

They had come to within a few yards of a door which led to her part of the house. Dav resignedly stooped to pick up the book, aware of her walking rapidly to that door. It opened and slammed shut behind her.

After silence descended, after the coming of the brilliant, purple Jana twilight, when the sun finally sank out of sight behind the slickrock mountains to the west and the sweet, soft darkness of the shining, starlit night of Jana settled, Dav tested the connecting doors between the two wings. All four resisted his pull with the rigidity of unbreakable locks.

THE following morning.

The sound of a buzzer precipitated Dav into the new day. For a meager moment the hope stirred in him that Miliss was calling. But he rejected that possibility even as he formed the image in his mind that triggered the nearest thought amplifier. His dismissal of the idea turned out to be correct. The buzzing ceased. A picture formed on the ceiling screen. It showed a Jana tradesboy with groceries standing at the outer door.

Dav spoke to the boy in the Jana tongue and glided out of bed. Presently he was accepting the bag from the long-nosed youth, who said, "There was a message to bring this to another part of the house. But I didn't understand clearly—"

Dav hesitated with the fleeting realization that the ever-present Jana spy system was probably behind those words. And that if he explained, the informant would be instantly relayed to the authorities. Not that he could ever tell these beings the truth. Their time for immortality was not yet.

Nor was it their time to learn the numerous details of the final disaster—when, in a period of a few months, virtually the entire human population of the galaxy rejected life, refused the prolongation drugs. People by the billion hid themselves and died unattended and uncaring.

A few, of course, were captured by appalled survivors and had treatment forced on them. A wrong solution, it developed. For the people who sympathized and helped, by those very desperate feelings, in some manner attuned themselves into the same deadly psychic state as the naturally doomed.

In the end it was established that the only real survivors were individuals who felt a scathing contempt for people who could not be persuaded to accept help. Such a disdainful survivor could sarcastically argue with someone—yes, for a while. But force him, no.

Dav stood at the door of the great house in which he and Miliss had lived these several hundred years. And he realized that this was the moment.

To save himself he had to remember that what Miliss was doing deserved his total disgust.

He shrugged, and said, "My wife has left me. She is living alone on the other side of the house. So deliver these to the door at the far east side."

He thrust the bag of groceries back into the hands of the Jana and motioned him away.

The boy took the big sack and backed off with visible reluctance. "Your wife has left you?" he echoed finally.

Dav nodded. In spite of himself he felt vaguely regretful at the revelation. To these Jana males, pursuit of females began early and continued into late life, terminating approximately at the moment of death. Until now the human woman had been a forbidden and unapproachable female. But no question—there had always been a perverted Jana male interest in Miliss.

With an abrupt dismissal Dav suppressed such thoughts. What they represented was unimportant. It did not matter.

LATER that day he saw her in her part of the garden, lissome, still beautiful, showing no signs of immediate deterioration. Apparently—even on this second day—she was still an immortal blond woman. Seeing her, Dav shrugged and turned away, his lip

curling and in his mind the thought that she was not really human.

She could not reason.

Still later darkness had fallen when, after testing with the various keys the Blaze Points of the Great Reservoir of the Symbols, he came to the summit of the hill from which he could see their long, white house.

Its night lights showed the garden and the glint of the river on the far side. But around it nothing moved. Silent stood the old house, familiar, a centuries-old landmark.

Something about the stillness below disturbed him. He had a sudden feeling that no one was there. The house itself was dark—both wings.

Puzzled but not alarmed—because he was safe and Miliss did not count for she was doomed anyway—Dav hurried down. He tried first a door to her wing. It was unlocked.

An amplified thought hit him. Miliss speaking mentally.

Dav, I have been arrested by Jaer Dorrish and am being taken to a military prison. I have the impression that this is a Dorrish clan takeover scheme and that it is connected with the fact that Rocquel has now been gone for a year. That's all. . .

The account was succinct, as impersonal as his own receipt of it. She had left him a communication of facts. In her message was no appeal, no request for help.

Dav stood silent. He was evoking a mental picture of the sar-



HUMANS, GO HOME!

donic Jaer Dorrish and, more vaguely, the image of Rocquel, the hereditary leader of the Janae, who had disappeared slightly more than one Jana year ago. A year on Jana was three hundred ninety-two and a fraction days long.

He felt opposed to Jaer, of course—in a way wished the steely-minded Rocquel were back. Usurpations usually meant trouble and unrest. But if it had to be, it had to. The Janae constituted a problem for him as Guardian of the Symbols. But individuals among them were not, in one sense, important. Though he had liked Rocquel, and still liked Rocquel's—widow?

Nerda.

In the morning I'll look into this...

II

ROCQUEL'S senses blurred in arriving. He lay down for a few seconds on the shadowy grass. It was already day—fairly early morning; he noticed when he climbed to his feet. He could see the palace, visible among the trees of the vast garden which surrounded the building.

Rocquel stood for a moment, head thrown back, breathing deeply of the air of his native planet. A year had seemed a long absence. So much had happened. Yet the sky of Jana and these hills that he had known in his lost youth so intimately seemed unchanged. Here, during all those tremendous days of his absence, time had sculptured with a slow

and exacting chisel. A gentle wind blew in Rocquel's face as he started slowly toward the road beyond the near trees, the winding road that would take him to the palace.

Incredibly, he made it to within a hundred yards of the sprawl of building before a Jana male came suddenly from around some trees, saw him and stopped. Rocquel recognized the other at once: Jaer Dorrish. Jaer was a big fellow, bigger than Rocquel, good-looking in a swarthy way. His eyes narrowed. He seemed to brace himself.

He said arrogantly in the tone of one addressing an intruder, "What are you doing here—stranger?"

Rocquel walked forward at a deliberate pace. He had been cautioned to take up his old position before he revealed the new facets of his personality. He didn't need the warning—it was implicit in the sly act of a person who knew him, pretending not to.

The problem of what one of the Dorrish men was doing in the Rocquel grounds so early in the morning—or ever—he would come to later. Right now the denial of his identity was surpassingly significant.

Rocquel said, "Jaer, consider—do you want me for an enemy?"

This time Jaer Dorrish showed his understanding of the situation.

"By Dilit," he said exultantly, "I've caught you unarmed."

He drew his sword in a single, continuous movement and began

to circle Rocquel, apparently not quite believing that he need merely rush in and slash. His eyes speculatively sized up Rocquel's condition.

ROCQUEL backed and simultaneously turned. He paused where Jaer had been standing. It took him moments to locate consciously the symbol made by the invisible Tizane energy, which he had directed to the spot the instant he saw Jaer. He kicked it cautiously, leaning backward so that his body would not be attracted by the symbol. His foot tingled unpleasantly—it was a feeling of something grabbing at him, something very powerful that did not quite reach him but only clawed the outer threads of his clothing, failing to get a good hold. Twice he pulled clear of it. Presently he was able to step over the broken ground without experiencing a reaction.

He was already out of danger when Jaer laughed and replaced his sword.

The big male said arrogantly, "If one does not threaten, one cannot show mercy. You see, Rocquel, I expected that you would return today. I have had observers watching the grounds all night so that I could have this confrontation with you." He grimaced triumphantly. "I analyze that you owe your return to me. Because yesterday I arrested the human woman, Miliss, and here you are this morning, exactly as I anticipated. It was a sudden

HUMANS, GO HOME!



Rocquel

intuition of mind. You have a lot of explaining to do—sir.”

Jaer was visibly jubilant. He waved at somebody behind Rocquel. Rocquel was wary of the gesture. In his careful defensive maneuvering he had gotten his back to the buildings. Finally he glanced carefully around and saw that Nerda was walking toward them.

As she came near she said, “You were not really in danger, were you? It showed in your manner.”

Rocquel said, “Not from one person.”

He walked to her and she did not resist his kiss. She might as well have. Her lips were cool and unresponsive. Her passive body did not welcome his embrace.

Rocquel drew back, scowling. An old anger against this defiant young female rose to gall him.

“Damn you,” he said, “Aren’t you glad to see me?”

Nerda merely gazed at him coolly.

“I forgot,” said Rocquel, stung. “It was a welcome period of rest for you. It’s difficult for a male to remember that Jana females do not have feelings.”

His wife shrugged.

Rocquel stared at her, curious now rather than hostile. Like all Jana females, she was icily aloof. He had married her in the usual fashion by having her father bring her to his house. She had subsequently borne him a son and a daughter but in the Jana female tradition she continued to treat him like an intruder in her

life—whom she must tolerate but did not particularly care to have around.

Rocquel scowled jealously.

“What about Jaer?”

That brought a reply.

“I think he has already explained his presence. Rather than have any further words from him, I would prefer to hear your explanation of your absence.”

Rocquel rejected explanations. “Come along,” he said gruffly. “Let us go inside.”

THERE were things to do. The news of his return would spread rapidly. The men in control of the council must not be allowed too much time to decide what to do about him. There would be regents, generals and their aides—who would be unhappy at the return of the hereditary ruler of the army. Before this night he must again be recognized as entitled by law and right to wield the scepter of his sphere.

He took Nerda’s arm gently. The move was calculated. He wanted to enter the palace beside her, his identity given validity by her presence. A year was a long time on Jana. Jana males particularly had short memories. He could not have planned his arrival better if he had personally made all the arrangements in advance.

Rocquel had the tocsin sounded as soon as he reached the main guard station. Shortly the palace guard and the servants were drawn up in five lines of a hundred each. He addressed them in his deepest baritone, recalling

himself to the older men, inviting the younger men to remember his face and body structure. He wanted them to be able to identify him under all circumstances.

He felt a little better when that job was done and the people had been dismissed to return to their duties. But not much better. The servants and guards could be talked to like a schoolroom full of children. But not the officers. Not the nobility.

He had a new, superior—yet not at all condescending—attitude toward these people. They were simple souls. He now understood how rapidly Dav and Miliss were rushing Janae into civilization by a trial and error system that attempted to take each man for what he was.

The lower classes were given easy tests. Those who showed even a modicum of mechanical ability were soon placed on assembly lines where they performed one action, then two, then several—but never many. For decades now some pretty sharp mechanics had been coming up the line and from their ranks arose a new class—engineers.

The officers and nobility were a different breed. Quick to take insult, they were truly impervious to all but the barest elements of education. They had been persuaded that being able to read and write was a mark of distinction but they were never entirely convinced. Why, they wanted to know grimly, were the lower classes also being taught reading and writing? The resultant, in-

SEPTEMBER, and the mad, wild beauty of the St. LouisCon is over (but won't be actually by the time you read this). Never mind. Traditionally, in publishing, September is a good reading month. Summer doldrums are over, the kids are back in school, everyone is thinking in a serious-minded way about the long, hard, intellectual winter ahead. So September is a big, big publishing month.

•

WE are celebrating it with George MacDonald's very kooky Kafkaesque fantasy LILITH. What is almost as extraordinary as the novel itself is the idea that anything as modern as this was written back in the 1890's by a Scottish (sometime) minister of advanced years. You'll recognize it by the superb Gervasio cover of a man in an attic.

•

AND in September, s.f.'s major novel of the year—STAND ON ZANZIBAR, by John Brunner. Not an easy book to read (clearly a bit beyond those mainstream reviewers). This is a jagged, fractionated, panoramic view of overpopulated times to come—the style itself expressive of the explosive tensions generated by too goddamned many people. The theme is well known to all of us. The handling is very special in-

deed. Stay with it for 30 pages and you'll be hooked for another 600.

THIS month also—O happy month—Larry Niven's volume of short stories which we titled **THE SHAPE OF SPACE**. Because it occurred to us that of all the new young writers, Larry's worlds are probably the most ingeniously specific. The shape of his particular space is very definite, very much his own. Thank whatever gods there may be that he is also a very good writer, so we can all enjoy.

SEPTEMBER is **TOLKIEN** month too—a promotion yet—although he is our candidate for the author than whom no one needs promotion less; and a peculiar wisp of a book titled **THE BEGATTING OF A PRESIDENT**. It's very in to be anti-Nixon. Not that we're terribly concerned about being in. (We're rational, that's all).

FOR those who've been pleading, Burgess' **A CLOCKWORK ORANGE** is again available (now it comes at .95 though), plus a couple of non-fiction works pertinent to Brunner's theme—**THE FRAIL OCEAN** by Wesley Marx and **MOMENT IN THE SUN** by Leona and Robert Rienow.

UNTIL NEXT MONTH—Enjoy your planet while you can. **BB.**

initely stubborn attitude had made it necessary to have a different written language for the people—one the upper classes didn't respect—before the nobles sullenly allowed their children to go to special, separate schools.

Telling the nobility of his return, it seemed to Rocquel, would have to be done at an all-male dinner in the vast dining hall adjoining the even vaster jousting room.

ABOUT mid-morning Dav at last felt free to put through a call to Nerda. There was a long delay. Finally an aide came to the phone.

He said in a formal tone, "The queen wishes me to inform you that her lord, Rocquel, has returned and, since he will in future represent the power of the armed forces, her talking to you might be misconstrued at this stage. That is all, sir."

Dav hung up, startled. The great Rocquel was home. Where had he been?

The hereditary general had always been a male first, his every movement and the tenor of his being expressing the quiescent violence of his powerful, super-masculine breed. It seemed an unfortunate coincidence for Miliss that the deadly, narrowed-eyed Jana ruler had returned. Dav divined that, if a struggle for power took place, Miliss might be its first victim.

After some thought Dav phoned the palace a second time and asked for Rocquel.

Once more he endured delay.

At last another aide said, "His Excellency, the lord-general Rocquel wishes me to inform you that a new law will be promulgated tomorrow to the council. He invites you to attend the council meeting which will be held at the slickrock rendezvous."

THE dinner that night shocked Rocquel. He had forgotten the extreme coarseness of his peers—at least it had become vague in his mind. An uproar of yelling and jesting began as the first males arrived. More arrivals simply added to the pandemonium. Things quieted down only to a degree when the meal was finally served. Plates clanked. Forks and knives clattered. Males yelled a peculiar type of acceptable insult at acquaintances farther along a table—insults having to do with the jester's belief that the other lacked sexual prowess. Such remarks always brought bellows of laughter while onlookers insultingly urged the object of the attack to prove his capabilities.

Yet since humor always probed the abyss of a male's sensitivity to criticism, suddenly a word would be unacceptable. In a flash the aggrieved male was on his feet, ragefully demanding satisfaction. Moments later the two nobles, yelling furiously at each other, would stamp out to the jousting room and add the clash of their steel to the sound of the dozens that were already there.

Shortly a scream of outrage an-

nounced the first blood had been drawn. In the presence of Rocquel the custom was that the male initially blooded in any way was expected to acknowledge defeat. Such acknowledgment meant that the insult was nullified. But the loser who felt himself still aggrieved could demand a later reckoning away from the palace grounds.

It was of this assembled group of mad creatures that Rocquel demanded silence when the eating was completed. Getting it, he gave the explanation for his absence that had been suggested to him—a religious withdrawal, a year of wandering among the people as a mendicant, a time of self-searching and thorough selflessness, of deliberate, temporary abdication of power.

He concluded his fabricated account.

"I saw our people in their daily actions. I lived among them, survived on their generosity and can report that the Jana world is indeed a worthy one."

He received a prolonged ovation. But a bad moment came when he presently went into the jousting room where the guests had drifted after his talk.

A voice grated beside his ear, "Your sword, sire."

Rocquel experienced a blank instant as he realized he was being challenged.

He swung around as of old in a swift, automatic defense action. His blade came out, weaving, before he saw that his challenger was Jaer Dorrish.

OF SYMBOLS



Jana is a planet with one large continent and a number of small islands. All the rest is ocean.

The continent is about two thousand miles square and from time immemorial scores of powerful tribes of the Janae have fought each other to one uneasy truce after another.

Then came two human beings, Dav and Miliss. They set up headquarters in a big, sprawling White House—by the river.

Their civilizing task had been to bring the warring tribes up to the status of city states, then to unions of cities and finally to one state for the entire continent, headed by the hereditary general of the largest of the original tribes. At the same time they were to create a scientific civilization of a kind that never existed during similar *natural* developments on other planets.

In effect, 4000 years of Jana socio-political development was telescoped into 400 through the use of Symbols familiar to Man through centuries of infancy but finally refined to powerful physical forces of instant effectiveness.

Normally a Symbol motivates. During a span of time millions of minds align in support of a single idea. At its most intense the idea is so strongly held by so many persons that rebellion against it becomes a mortal offense.

Study of the chemistry of such an alignment of minds behind an idea had revealed two common de-

and MAN...

nominators. For each Symbol the body actually manufactured a substance which varied slightly from Symbol to Symbol. The variations were expressed in different codings and energy charges.

The energy charges were the second common denominator when reproduced artificially—and amplified—they showed as palpable force fields. Such fields had only a mild effect on individuals who believed in the Symbol. But they became progressively more palpable when experienced by persons who resisted the Symbol. In the presence of someone who was totally against the Symbol the field attained such an intensity that it acquired a spinning motion—at which stage it could be dangerous to life.

Already begun on Jana was a special type of parliament: The Chosen. This body would eventually show its remarkable qualities but was currently restricted by the power of the nobles.

The elective system was simple. The electorate was divided into groups of a hundred voters. Each group sent a representative to an Elected Board. Each Elected Board consisted of a hundred delegates and, in turn, elected members to Elected Committees, who selected The Chosen.

Each level group had its political, local or national duties which, for the time being, were subordinated to the automatic privileges of the nobles.

HUMANS, GO HOME!



Jaer



Rocquel

Rocquel poised, sword ready. He gazed questioningly into the dark, cynical eyes of his enemy.

From somewhere in the sea of faces surrounding them, from out of the diminishing curtain of sound—diminishing as more males grew aware of what was happening—Rocquel was aware of a top officer speaking sharply.

“Jaer—have you forgotten? You have to state your reason when you challenge the crown. And it must be a reason acceptable to the majority present.”

“My reason,” said Jaer in his deliberate fashion, “is that story of where he said he was during the past year—”

The officer who had spoken walked forward. He was grave, fortyish, narrow-eyed.

“Is it a matter of misunderstanding the story or of rejecting it?”

Silence had settled over the room and the words made an echo into the distances of that cavernous space. The question visibly gave Jaer pause. His expression showed his comprehension that a to-the-death had to follow any total challenge of a noble's word.

Abruptly he laughed and put away his sword.

He said, “I think I shall ask privately for a clarification. If Rocquel decides what I have to say is truly a reason for a challenge—then we shall have our bout. Perhaps tomorrow.” He thereupon stepped close to Rocquel and said in a low insolent voice. “Your excellency—the coincidence of my arresting Miliss

and your prompt return needs to be explained. If the two are not related—you will, of course, have no objection to my plans for disposing of her.”

Rocquel said evenly, “If you are operating within the frame of the law—”

“The law is what the council decides,” replied Jaer arrogantly. “Do I have your word that you will not interfere—in view of my suspicions?”

“There will be a new law,” said Rocquel in a formal tone. “Within the frame of that law—I shall not interfere.”

He walked away, leaving Jaer Dorrish with a black scowl on his face and a query about the “new law” unspoken on his pursed lips. In his mind Rocquel read the thought that this very night he must attend on the human woman—must force her before any protecting law was passed.

Yet Rocquel could not be sure he had read correctly even when Jaer left the party within minutes.

NERDA was waiting for Rocquel when he came in. He was late, very late. As soon as he entered—and after he had nodded to her—she retreated to her dressing room and began to get ready for bed. He watched her shadow through the translucent door. A regretful thought passed through his mind that he should have given her permission to retire without waiting for his return.

Presently he rejected the thought of such leniency. According to Jana law a wife could

not undress at night to go to bed until her husband gave permission. She could lie down with her clothes on. She could even sleep though that was frowned on. She could go to bed before his return only with his written permission or if a doctor stated in writing or in the presence of witnesses that she was ill.

The rules seemed harsh. But Rocquel had read the ancient documents containing the results of studies made of Jana female behavior prior to the passing of the stringent laws and there was no question. Jana females would associate with males only when forced. A female, unforced, would promptly move off by herself and remain that way all her life.

The facts had been set down by amazed historians who named names and places. The truths of the long-ago experiments in allowing freedom to females were attested to by famous people of Jana history. There was no point in repeating the experience in modern times.

Jana females had no maternal instinct and particularly detested their male children. It had been a sad thing to read some of the comments made by females during the free period.

A male child will eventually become a Jana male—that most detestable being. And so any charming childlike attributes he may have are an illusion. . .

Another female had been in favor of the race's dying out—because its continuance required that Jana males also survive, to

which she was "totally opposed."

What could males do, confronted by such females?

They had done it.

The laws were just and as kind as they could be. A female could complain if she suffered any ill-treatment—and receive an immediate hearing from a court. No expense was spared by the State to protect her from a brutal husband.

In return she must do her duty by her husband and her children. Since she had no feeling about her functions the law prescribed her exact routine.

Obviously even the hereditary general could not lightly alter either the custom or the law. Nerda came to bed and presently he gave her permission to sleep.

She slept—it seemed instantly.

III

Miliss heard a key in the lock of her cell. She had not undressed. She sat up in the rough bunk and watched curiously as a manlike figure, waving a long flashlight, unlocked the door and entered.

From the vast shadowy size of him she divined his identity. But not until he deliberately raised the light and beamed it into his face did she recognize Jaer Derrish.

His face, like that of all Jana males, was too long, too much given over to nose. But the skin was a clear reddish color and smooth.

She was not repelled.

At least, she thought, the Janae were a distinctly humanlike breed,

for which—in view of the fate she sensed was in store for her—she was thankful. It did not occur to her to formulate in her mind the mental pattern that would activate a thought amplifier in the house where she and Dav lived—no help for her from that rigid mind, she decided.

But she did have a purpose of her own adaptable to this situation. It had been growing on her all day. The male stepped briskly across the cell toward her cot.

She said hurriedly, "I've been thinking about what you told me last night—your prediction that Rocquel would return as a consequence of my arrest. And it happened. He did come back."

Jaer stopped his forward movement. He did not reply. Her next words quivered on the tip of her tongue but remained unspoken.

Miliss was startled. She had an enormous sensitivity to small signals. He had been coming forward with that Jana male arrogance, his whole manner vibrating with the message that he would not be denied.

And now he stood still. And the way he stood telegraphed uncertainty.

"Is something wrong?" Miliss asked.

More silence, a sense of darker emotions. She was astounded. Jana males were reputed to have a peculiar calm humor in the rape situation. Both humor and *savoir-faire* required expression in words, not silence.

During the strange pause, like a suspension of time in the cell, she had nevertheless become aware of the night and the prison. A time had been on Jana when there had been no prisons, only a few compounds where "enemies" were kept prior to execution.

On Jana, for more millennia than she cared to recall, people had been tolerated—or executed. No middle situation had existed. This and similar prisons were actually a great victory for less harsh attitudes.

So the sounds of a vast life around her were presently heartening to Miliss. She heard metallic clanks, distant throat raspings, Jana males snarling in their sleep and occasional echoes of faraway voices. Sounds of many prisoners. The Nunbrid prison was large. It was filled with people who would be tried in court for their offenses and who were not subject—as had once been the case—to the compulsive masculine rage of some intolerant noble.

A feeling of peaceful accomplishment was settling over Miliss. Dav and she had civilized these people.

Jaer finally spoke.

"I had a sudden insight—and I'm having another one."

His voice was strained, not really calm. She sensed in its tone an advantage for her. Somehow the situation was no longer as dangerous as it had been. This male was genuinely disturbed.

By what?

MILISS pressed her own purpose upon him.

"Is that all you can say about the coincidence of your prediction and Rocquel's return?"

"I'm still wondering about it myself," was the grim answer.

The threat was in his voice again. She rushed past it.

"Don't you realize the impossibility of such an unsupported insight—the odds against its baring truth?"

For a tense moment in the unyielding closeness of the cell, in the darkness broken only by a flashlight that sometimes pointed at her and sometimes at the metal bars—and occasionally, briefly, at Jaer himself—she thought that he would acknowledge reason and dismiss the subject. But Jana nobles, she shortly decided in despair, were not up to her kind of strict logic. His mien told her he was accepting his intuition.

For a long moment, while he stood there silently, her fear grew.

Then: "There's only one explanation," he said slowly. "Rocquel was in hiding with you and Dav while he was gone."

"No. That's absolutely not true. If you're acting on that assumption—you're in danger."

"Danger?"

"There's a hidden force at work. It can strike at you if you ignore it. In fact, it probably has already struck—or how could you have had two insights?"

"You're trying to alarm me," said Jaer harshly. "And a Jana male cannot be frightened."

"But he can think about how best to survive," countered Miliss. "At least—" she couldn't help the biting remark—"the males I know always do."

Again silence filled the cell. The light winked off. Into that darkness and that silence Miliss projected what seemed to her to be the only possible explanation.

"What has happened means that you've been programed," she said.

"Programed? I don't understand."

"It's impossible that you could have a second major intuition unless somebody had installed it in your mind under mechanical hypnosis."

"I just had it. It's my own thought."

"It's not your own thought. You're being manipulated." She broke off. "Don't you see, you couldn't possibly—being a Jana noble—have all by yourself predicted Rocquel's return on the basis of my arrest. It's too radical and fantastic a prediction. Yet it came true. And now another one? Impossible."

Once more he was silent. The flashlight was on again, its beam tilted casually, showing his scowling face, narrowed eyes and lower lip pushed up. He was evidently having unpleasant, calculating thoughts.

Abruptly he asked, "Why did you and Dav separate?"

Miliss hesitated, then said, "He was more and more adopting the attitudes and behavior of the Jana male—and treating me as Jana

males treat Jana females. I had had enough years ago—but we were alone here, two human beings, the last of our kind in this area. So I tried to make my peace with the situation as Jana females have done for so long.”

THERE was actually more to it than that. It had, of course, kept occurring to her that the frequent despair she had felt over Dav might in fact be the death wish that had destroyed the human race. She had fought against her growing embitterment, until, one day not too long since, she had had an insight of her own.

Human males were, had always been, exactly as vicious as the Janae. But human women, having their own maternal instinct to satisfy, had endlessly compromised with the egotistical villains. The need for motherhood had put a fortunate—for the men and the race—veil over a woman's awareness of the impossible true nature of the beasts.

Once she had recognized the thought, leaving Dav was only a matter of a brief period of rethinking her reasons, and convincing herself finally.

Jaer's voice came grimly.

He said, “I didn't have my first insight until after I had arrested you. I've had my second one in your presence. So you're doing this to me. By Dilit, woman—”

Miliss said urgently, “Tell me what your second insight is.”

When he had told her she said, “But that's ridiculous—what good does that do me?”

Jaer must have recognized her logic. He stood very still.

After a long pause he said slowly, “But I did get both thoughts in your presence, so someone knows I'm here.”

His manner showed unease. The implication of danger was visibly penetrating his awareness. Miliss sensed her advantage.

She said, “What is so meaningless about these insights is that I detect that your purpose in arresting me was entirely personal. You saw a possibility of challenging the throne and simultaneously obtaining me as a mistress—”

“Silence, woman.” Jaer sounded alarmed. “I have never desired the throne—that's treason. I'd better leave before I damage you and ruin my case against you in court. But don't think I'm through with you.”

The light winked out. Quick steps sounded. A metal door clicked open and clanged shut.

She heard him retreating along a corridor. And realized that she was almost as shaken as he.

That second insight, she told herself, is absolutely mad. . .

But for the first time in many years she slept poorly.

IV

THE next day.

Shortly after sunrise the council members began cycling up to the meeting place at the beginning of the slickrock range, seven miles west of Nunbrid. By the time Rocquel arrived on his new motorbike, Dav and eight Jana

males of high rank were already there. The human sat on his bike off to one side but the Jana nobles were impatiently gunning their motors, visibly anxious to get started on their hazardous meeting-in-motion.

Rocquel was greeted by a number of insulting but quite good-natured comments about his overweight machine. He responded with well-placed sneers about overcautious small-bike riders. But he was curious. There had been changes in design during his absence. Wheeling around with the casual daring of an expert cyclist, he made quick, searching examination of the mount of each council member to see what time and manufacturers had wrought.

As always for slickrocking, all the motorcycles were small, tough, and light. But Rocquel noticed that three of the bikes were smaller than he remembered—not more than 100cc., perhaps even 90 or 80—compared to his 175 cc. machine.

He questioned the three owners about it. He was still getting boastful replies when Jaer Dorrish and a sly-eyed air-force officer roared up and charged their metal steeds up the first incline.

Jaer yelled, "Meeting called to order—"

A number of nobles uttered wild cries, gunned their motors and took off in pursuit of the latecomers.

Dav brought up the rear.

Moments later everyone was in motion and the meeting of the

supreme council of Jana was in session.

In the old days—before the machines—a king had held his council meetings while riding a tamed, high-backed Mesto-beast. The Mestos were dangerous, cunning creatures, always looking for an opportunity to upset their riders, and Mesto-riding was, accordingly, considered great fun. But a Mesto simply could not cover the distances or go over the rough and beautiful slickrock country.

At first the nobles climbed steadily, strung out unevenly, bobbing up and down over domes, knobs and ridges, skipping at a good clip over the almost glass-smooth, steel-hard straights. Rocquel, coming up from behind, kept edging up to Jaer and finally had his bike racing along parallel to the bright green machine of the big male.

"What's on the agenda?" he yelled.

Jaer's answering cry brought up the subject of Miliss. He made a slashing gesture with one hand, cutting the air with it as if it were a blade, then showed his teeth in a grimacing smile.

He shouted, "I propose that this woman be put to death."

"On what grounds?" Rocquel roared back, surprised.

Jaer's suggestion was discourteous in view of the fact that Dav was at the council meeting. Or was it possible that Jaer had not yet seen Dav?

As the day dragged by Jaer's unawareness of Dav began to

seem less and less a coincidence. But Jaer's intentness on Miliss and on the new law might have accounted for his attitude toward Dav.

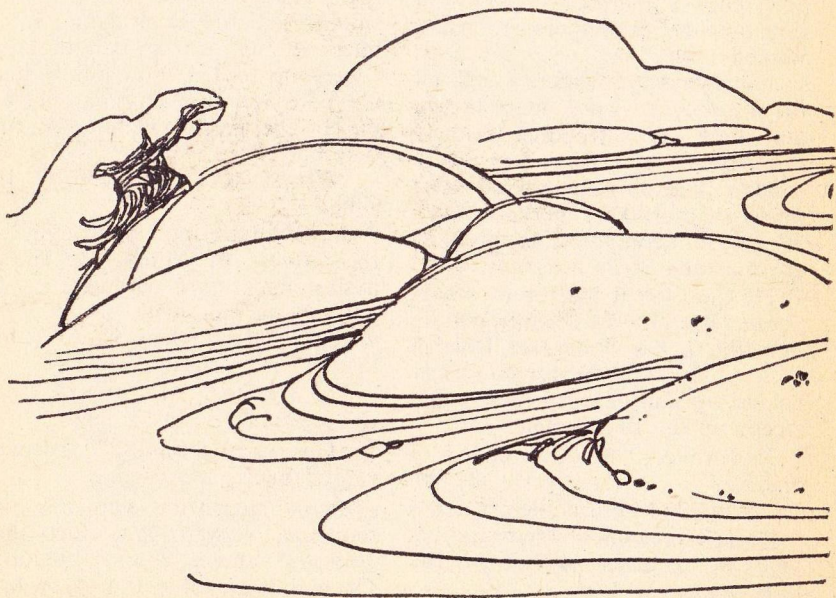
DAV anticipated a crisis as soon as he was told what was on the agenda and the nature of the new law.

The law itself required no spe-

cial explanation for him. It was he who had proposed the idea of a constitutional monarchy to a resistant Rocquel. The very next day—a year ago—the powerful Jana leader had gone off on a religious hegira.

Now he was back, acceptant.

Mentally, Dav triggered a thought amplifier. It in turn channeled power into a relay that blazed one of the symbols.



The symbol of a Constitutional Monarchy.

That done, he considered with mirthless good humor the proposal to execute Miliss. Ironic that Jaer was planning to put on trial a person already doomed.

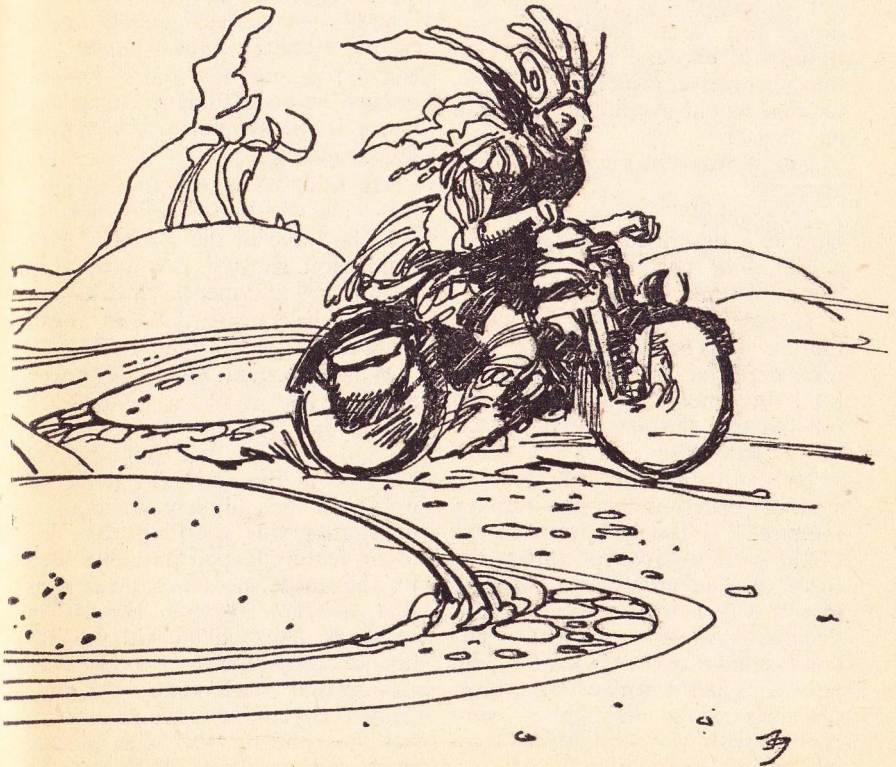
Should Jaer be told?

But when Dav finally joined the group the crisis came so rapidly that there was no time to mention anything.

The council members stopped in front of a big cave, at the 9000-foot level. Here the great nobles of Jana sat on bikes with engines idling while they gulped breakfast.

Rocquel was aware of an ugly, throaty sound from Jaer. He spun around and saw Dav easing his bike into the clearing. Dav came to a full stop.

Beside Rocquel, Jaer let out



a bellow and gunned his motor.

THAT night Rocquel described the day to Nerda, then asked curiously, "What do you think happened to Jaer? You know more about what Dav can do than anyone."

Conversations between them were not common. She was not required by law or custom to speak to him as long as she performed her wifely duties. He was not surprised when she did not reply. But he deduced from the thoughtful expression on her face that she was considering the matter and would eventually give him an answer.

Yet it was morning before she answered.

"A symbol," she said then, "as Dav has described it, represents a real thing or thought. It is not itself the thing or the thought—"

Rocquel waited, uneasily aware that he was being presented with a concept that might be too subtle for a Jana noble—too subtle even for himself, despite his past year of indoctrination.

Nerda continued, "When the symbol representing constitutional monarchy is finally a part of the thinking of millions of Janae, the force of it in all those minds will maintain such a system for decades under normal circumstances—or at least until another symbol replaces it, which, of course, is happening very rapidly with Dav and Miliss forcing us into civilization."

Rocquel felt helpless before her explanation. She seemed to un-

derstand what she was saying and he didn't.

We males of the nobility are really no longer a part of what is happening. . .

It was discouraging but he persisted.

"What I saw," he said, "was Jaer's motorcycle stop—not short—but as if it ran into an elastic wall that took the full force of his forward impetus and gently flung him back. He ended up on the ground. But he was not hurt."

"He struck the symbol," said Nerda. "These symbols have become progressively more violent in their reaction. The most violent so far is the symbol of a constitutional monarchy."

He said, "You say the symbol. But what was the force involved?"

"The force of the symbol." Her expression showed her awareness of his bewilderment. "Don't you see?" she urged. "All those millions of people who believe."

What Rocquel was seeing was that he had made a mistake in asking her for her opinion. He wanted to say that nobody yet believed in the new law. It would not even be publicly announced until later this morning. But his awful feeling leaped past that idea to the more personal awareness that he had lowered himself in her eyes. He recalled with a sinking sensation the Jana male conviction that if a female even once gained a genuine advantage over her husband it was the end of their relationship. Nothing the male did after that could repair the damage.

Fighting for recovery, he nodded and said aloud, "I see. Your many conversations with Dav have been very educational and valuable for both of us. I congratulate you. It's a difficult concept."

He divined from an odd look in her eyes that she saw through his verbal stratagem.

She said slowly, "We mustn't expect too much from a constitutional monarchy in terms of change in the passions. Rule of law merely regulates a society in a more orderly fashion than absolutism. An accused individual is no longer subject to arbitrary judgments but is allowed time by the courts to defend himself within the frame of the law. Yet in the end he may pay the same penalty." She concluded: "And so, to answer your question of last night—I believe we shall see how Jaer was affected by the way he allows the trial of Miliss to be conducted."

Rocquel, who was still striving for recovery from his fateful error in having this discussion with her at all, said in his most matter-of-fact voice, "What I'm curious about is the nature of the charges he intends to level against her—"

THOSE charges surprised Dav more than Rocquel, who still nursed memories of his year away. He had learned something about humans during his absence and could even control a certain symbol himself—without, he realized, really understanding it.

Miliss was accused of being an

enemy alien, illegally resident on Jana; spying for an invading alien force from space; conspiring to pretend to be a member of a decadent race when in fact she was a member of a superior, dominant race set down among primitives.

She was also charged with harboring criminal intent.

Dav scanned the headlines unbelievably, standing in the rain in front of a newsstand. Janae in colorful raincoats drifted past him as—directed by a guide sentence on page one—he turned to the editorial page. There he read in the language of Low Jana:

In an unprecedented action the government today challenged the right to live on this planet of the two relics of an older civilization. Almost melodramatic charges of conspiracy were leveled at the couple but only the woman has been arrested.

We propose to leave to the courts the resolution of the legal tangle implicit in this arrest but find ourselves thoughtful about the matter on a strictly theoretical basis.

Explorers have recently found isolated tribes of Janae still living in stone-age cultures. Contact with our superior civilization was in-acted as a depressant on the aspirations and mores of the backward peoples and they have seemed unable to recover as a group.

Until today's governmental action we have known a reverse condition with the two human beings resident on Jana. They represent an older culture—one that apparently had virtually died out for reasons never analyzed. Such a decadent culture, even though it had clearly attained heights of scientific achievement far in advance of what is available on Jana, has not acted as depressant on spirit of the Janae.

Matters to be adjudicated by the courts include the following: Are Dav and Miliss representatives of a superior culture that is merely pretending to be decadent, so that the normal depressant impact upon an inferior culture is avoided? If so, does their presence here come under the heading of an alien conspiracy? And can such a purpose be interpreted as an invasion?

THE account was perceptive. It indicated the presence of a highly intelligent professional class already in existence in Nunbrid and hundreds of other cities. The lower-class Janae had clearly matured more rapidly than their hereditary rulers. Yet the tone of the editorial was neither inflammatory nor antagonistic. In fact, it showed respect for the government and awareness of the meaning of the new law.

Dav's own thought ceased at that point. He had been aware that passersby were glancing at him. Now, suddenly, one big male stopped, uttered an explosive oath and lifted an arm threateningly, as if to strike.

Dav shrank back involuntarily. The male grew instantly contemptuous and kicked at him. Dav, alert now, dodged with easy skill but dropped his newspaper. The big fellow scooped it up from the wet sidewalk and pounded the soggy sheets.

He roared, "You've got to be nothing. You're the last of a vanished race. A nothing! A nothing!"

Dav retreated. He found a side street, slipped into its darker, damp distances, heading for home. As he approached the edge of the city he heard a sound in the night ahead of him, a swelling murmur of ugly voices. Then, out in the open spaces between himself and his house, he saw a huge crowd carrying torches.

Startled, Dav withdrew from the open area and headed for a small house on a nearby street. The place was actually a secret entrance to the big white mansion. Long ago, when Jana had been more primitive, unpleasant incidents had occurred. The secret access had often proved useful.

He made his way safely through the connecting tunnel to the big house and from its interior gazed out at the crowd through a viewplate. The plate magically dissolved the night and the rain, showing a dull day-view of the

large grounds in front of the house.

At first look the mob seemed even huger than he had estimated. Dav shook his head sadly. The pattern was the same as it had once been on old Earth. At the top was the hereditary hierarchy. Next came a law-abiding middle-class of people. At the bottom seethed the vast mass of the unthinking.

The hierarchy was semi-psychotic, murderous, subjective. And the middle class was still relatively new and unaware of its future power. The mob was completely duped.

Dav observed with relief that several hundred troops patrolled an area between him and the angry crowd. An officer spoke through a loudspeaker system, addressing the mob.

"Go home. The rule of law shall prevail. Go home. If these people are spies they will be judged by the law. Go home—"

The frequently repeated admonition began to have its effect toward midnight. Dav saw that there were fewer people outside and more were drifting back toward the city. But it was nearly two in the morning before, feeling that the danger was over, he went to bed.

Lying there he rejected the accusations against Miliss and himself with little more than a moment's consideration.

It was true, as the newspaper editorial had pointed out, that primitives had in the past suffered psychic and racial disaster as a

result of being exposed abruptly to a superior culture. And, conceivably, somebody might mercifully evolve a more systematic approach to the problem.

But the mentors would know. That had to be. It would be absolutely ridiculous if Miliss and he weren't aware of their own realities.

All these hundreds of years of ignorance on so vital a point?

Impossible.

The truth was that simple—and obvious. Nearly four hundred empty years made a weight of time in his mind that no words and no Jana accusation could penetrate.

He had no trouble sleeping.

V

ROCQUEL had stayed in the palace communications center during the period of threat against Dav. Several times he spoke directly to the commanding officer of the troops patrolling the grounds.

At last, weary and a little guilty at having been out late again, he went to his apartment. The bedroom was dark as he entered—and he had an instant, awful intuition.

He flicked on the light and stood confused and shaken. Nerda was in bed, undressed under the sheets. Her eyes were closed. Her breathing came with the regularity of sleep.

Rocquel's thought flashed back to their conversation of the morning and to his sudden feeling that he had ruined himself with her.

His inability to grasp the meaning of the symbol idea troubled him again.

Standing beside his sleeping wife, he visualized the repercussions of her rebellion if it were ever found out. His absence had shaken the throne and he had returned too recently to have fully recovered his power and position. He had divined an uneasiness in the nobility—it would take a little while before those suspicious, violent beings were reassured that the new law was not a direct threat.

And if they found out that he was so weak that he could not control his wife—Instantly an old impulse propelled him toward her sleeping body. His hands and jaws clenched with the automatic effort that would shove her in a single thrust out of the far side of the bed.

He poised before the act, suddenly gripped and held by a thought and feeling new to him.

He had been about to act on the Jana male attitude. But was Nerda justified in her rebellion? Was the old way the way women should be treated? Had his analysis of her reason for what she had done been accurate?

A flash of an old male paranoia darkened his face and mind—the absolute conviction that Nerda was doing this because another male had gotten to her.

Dav, the human?

Some portion of Rocquel's mind recognized the total irrationality of the thought—recognized that if it were true Jana fe-

males would not associate with males of their own free will, they obviously did not betray their husbands. He was also aware that Dav, who had an unlimited sense of personal responsibility, would not have taken advantage of the queen's year of "widowhood."

The recognition and awareness were not enough for his fevered brain, alive with brutal images.

He had to know.

He turned and walked out of the room. Within minutes he was part of a motorcycle army unit roaring through the night streets of Nunbrid toward the military prison where Miliss was confined.

THE long, bleak concrete corridors of the prison echoed to his footsteps and those of his guards. The light carried by the prison's officer-of-the-night was bright enough but it cast wavering shadows.

In that uneven brightness, Rocquel noted the gray drabness of this prison world, and some of the singleness of his purpose softened. The thought came to him that Miliss had been held here now for several days and that this was wrong.

He could do nothing about it under the new law but within himself he felt a deep anger against Jaer.

The rage was brief. It ended as they reached Miliss' cell—and there she was. Rocquel went in alone, his guards retreating, waiting.

Their first moments together were ordinary. Miliss' surprise and

pleasure when she recognized him, then her puzzlement that he should come at so late an hour gave him his opening.

He asked her the question: Why had she and Dav separated?

The woman was startled. She sensed the dark purpose in him—who had always been so friendly to her and with whom she had communicated so well in the past.

After a moment, realizing that delay was unwise, she gave him Dav's diagnosis—that she had gone into the death thing that had destroyed man. She deemed it the best reply, considering all possibilities.

Her answer and its deadly implications for her shocked him out of his madness. She explained in greater detail.

Rocquel said, "Then what you are saying is that you acted out of some parallel to the type of emotion used by people who actually did have the death thing. You did this consciously, knowing Dav would believe it was in fact the death thing."

"I think that's what I did," Miliss replied. She added quickly; "The death thing is subtle. One can fool oneself."

Rocquel persisted, "But as far as you're concerned, you're not really dying?"

"As far as I know I'm not."

Rocquel considered that in a gathering amazement.

Finally: "But why aren't you doing something about getting out of this prison? You shouldn't be here."

"What can I do?"

"Don't you have any protection of your own?"

"Nothing," she said, "but the symbols so far activated. Except for a few hand weapons and mobile energy units, most of which we've given to the Janae, that's all we have."

"What about other—later—symbols?"

"Their time is not yet," said Miliss. "They wouldn't work—not for Janae."

Rocquel sighed.

But, he wanted to say, Dav used the power of millions of believers in a constitutional monarchy before they ever believed in it—in fact, before they even knew about it. Why not use the power of millions of believers in some future symbol before they ever believe in it?

He did not ask the question. The concept of any symbol was beyond his ability to grasp. He realized humbly that he was a Janae nobleman of a somewhat simple nature and that the year he had spent aboard the earth battleship—the time he had described to no one—had been really like some tribal king's being—entertained—if that was the right word—by traders or scientists from a superior civilization. Being kindly disposed, they had been anxious not to hurt his feelings—but to them he had been a nothing. His status had been meaningless except insofar as they had a policy of using native kings in their interplanetary welfare work.

Nonetheless, he tried again to reach understanding.

At his request Miliss explained the power of a symbol once more. But it didn't penetrate.

We thick-skulled males. . .

AND the ridiculous thing," he explained his failure to Miliss, "is that I myself actually have control of a symbol—"

He stopped. It was an admission that he would have made to no other living person—only to this one individual with whom he had always felt able to speak freely.

He finished lamely, "Of course, that was given to me as a protection."

He stopped again because of the look on her face—intent, avid, seeking, startled, unbelieving but finally believing.

Miliss whispered, "Who gave you control of that symbol?"

"Human beings," Rocquel said simply.

She sank back. She seemed to cringe on the cot as if, like a mental patient, she were wracked by a psychic disease that contracted her body, curling it, twisting her head to one side.

Finally she said, "Then Jaer's intuitions, accusations, may be true. There are human beings out there—" She suddenly broke off, breathless. "Tell me exactly where you were, what you saw—"

Rocquel described his year on the battleship.

She whispered, "There were both men and women?"

"Yes. It was a community of

several thousand, I would say."

"They never landed anywhere?"

"Not that I was aware of."

He sighed. "But it was such a big ship. I saw only what appeared on the visual screens in the sections where I was permitted to wander. They didn't teach me the language. I only heard what the interpreting machines said to me." He considered possibilities. "Landing parties could have gone down to planets without my knowing it."

"It was one of these humans that taught you control of a symbol?"

"Yes."

Miliss persisted: "But what was it supposed to do? If Jaer had actually slashed at you with his sword—what would have happened to him?"

Rocquel didn't know.

He explained slowly, "They warned me to be careful with it—because if I wasn't it would hook on to me, too." He added: "When I set it up against Jaer I could feel it tugging at me sort of like—" he paused, groping—"maybe like a magnet."

"But what is it a symbol of?" Miliss asked.

Rocquel had no idea.

She went on, baffled: "It must be drawing its energy from some meaningful idea on another planet—since we didn't sense anything here. But what could it be?" No answer came to her and she asked, "You still have control of it?"

He nodded.

"Did they say they would let

you maintain it permanently?"

Rocquel gazed at her unhappily. "I can't remember. I was told something—but each time I think I'm going to recall it, it fades."

"That sounds like close-to-the-surface programing." Miliss nodded. "As if whatever it relates to might happen at any time. So we must be near a crisis." She added, obviously thinking out loud, that only a symbol could act with subtle or powerful influence over distances. She finished: "It must be very personal to you, which in itself is unusual. For example, if I could do what you have described—I could get out of this prison."

MILISS' second admission of helplessness focused Rocquel's attention on her situation. Her confession that she could not protect herself was abruptly enormously significant. It placed control back in Jana hands. Janae could accept or reject a gift of knowledge from the reservoir on a self-determined basis.

We can use what they have but we don't have to. . .

Rocquel felt somehow stronger in his Jana identity as he had that awareness. The accusations leveled at Miliss by Jaer had had a certain truth to them. The entire populace felt a displacement as a consequence of the human presence, gentle as it was.

After a little he was able to reason out the extent of her predicament. He was appalled. Her position was very severe if she

and Dav could not really protect themselves.

With an effort he pushed aside his anxiety for her, grew calm and grave.

"There will be a difficult time ahead, my dear," he said gently. "The new law binds me as much as it does everyone else. I cannot arbitrarily set you free. Have you an attorney?"

"Not yet," Miliss answered.

"I'll call Dav and tell him that it is imperative he get one for you."

"He won't do a thing." She reminded him of the death-drive situation—how only those survived who refused to help. She finished; "I counted on that to keep him away from me. So there can be no help from him."

Rocquel shook his head, smiling, and pointed out that his position in the matter was stronger than Dav's.

"I'll call him," he said firmly. "He'll do it because I ask him, not necessarily to help you." He broke off. "He's the one who should act in this matter. It will look odd if he doesn't. So he will."

At that moment Rocquel accidentally caught a glimpse of his watch. It registered nearly four in the morning. He was instantly contrite.

"I'm sorry," he apologized. "I've kept you awake."

Miliss brushed his words aside.

"I feel so much better. You've given me the first information from—out there—" she gazed upward, waved vaguely—"that

I've had in all the years Dav and I have been here. It's not clear—it's hard to decide what it means. But now I know that there are still a few other human beings."

On that note they separated. Rocquel returned to the palace and presently slipped into bed beside the sleeping Nerda.

She was a problem to which he had no quick solution either.

VI

THE Jana attorney whom Dav consulted shook his head gravely over the fourth count.

"The other accusations," he said, "have as yet no legal penalties. The judge could do anything, could even release her. But criminal intent has proved dangerous in the past. It can bring a capital verdict."

Dav attended the trial as a witness, getting angrier every minute as all his "gifts" to the Janae were used as evidence against Miliss. The argument of the State was that a superior culture was, by way of its scientific gifts, cunningly guiding the Janae away from their natural development and into a mental enslavement that was the equivalent of a takeover of one people by another. Dav's concern was with the accusations, not with Miliss.

Called to the stand by Miliss' attorney, he denied all such intent.

"Science is neutral," he said. "It is the truth of nature. Jana scientists would normally and in due course have discovered ex-

actly the same truths. In giving the Janae the scientific artifacts of Earth's ancient civilization I fulfilled a duty imposed upon me by a vanished race to hand on the torch of knowledge as rapidly as feasible in the hope that, with such a head start, the Janae would succeed in establishing a permanently growing civilization instead of one that would eventually dwindle as others, including man's, have been them—"

When he later came out on the street a troop of guards sent by Rocquel saved him from a demonstrating crowd.

KEEP YOUR FOREIGN SCIENCE
...JANA MUST BE FREED FROM
THE ALIEN YOKE. ...JANA FOR THE
JANA. ...DEATH TO THE INVADERS
...HUMANS, GO HOME—

The crowds screamed insults as Dav was escorted to a bus that took him, accompanied by several guards, to the end of the line. From there the soldiers walked with him to his house, where other soldiers patrolled the approaches, back, front and sides.

Miliss was found guilty on all counts and sentenced to death. Three appeals to ever higher courts failed. But Rocquel granted her a full pardon on the grounds that The Chosen had not legislated on the matters at issue.

"Prime minister" Jaer Darish—and where had the title come from?—thereupon introduced amendments to criminal law. They were duly passed by The Chosen. Rocquel, to Jaer's surprise, did not veto the legislation.

He asked Rocquel about it. The hereditary ruler gestured.

"I told you I wouldn't interfere." He paused, curious. "Suppose all those charges you're making turn out to be true. If man is really a superior race, then presumably a fleet of total power will come to the rescue of his representatives on Jana—and we will all be degraded by having to submit, however briefly, to an occupation force. What would you gain if that were to happen?"

Jaer scowled.

"Jana honor," he said with the traditional arrogance of the Jana male, "demands that the truth of this matter be brought out into the open. We shall deal with this so-called total power when we see it."

"With what weapons?" Rocquel asked derisively.

Jaer said, "The human man is being watched night and day. At the proper moment we'll make a raid and we'll capture all man's scientific secrets and make an end of this degrading dole system on which he seems to have been operating—one secret at a time. Such doling is an unbearable insult. We want to have everything—now!"

Rocquel stared sardonically at the other's flushed face.

Finally he said skeptically, "Your concern with such minor matters does not fit with your previous character, Jaer. I wonder what you're really up to."

The big male stiffened. "Do you question my loyalty, sire?"

It could have been a dangerous

moment. But Rocquel merely shook his head chidingly.

"No, Jaer, I expect you will accept the new law. It is to your advantage. What is your next move?"

"You'll see."

Jaer turned abruptly and walked away.

LATER Rocquel sought out Nerda, reported Jaer's statements and asked her opinion.

She answered at once—no longer a surprise to him. Ever since her rebellion on the matter of going to sleep without his permission—which she now did as a matter of course—she had been freer in her responses in every way, even in their personal relations.

She told him that in her opinion Jaer wanted the human woman and that therefore his real target in the trial was not Miliss but Dav.

Rocquel stared at his wife.

"But—" he began and stopped.

Careful, he thought. *Don't give her another reason for losing respect for you. No knowing what repercussions that would have...*

But he felt slightly helpless before her statement. What she suggested was an immensely tricky thing for Jaer to be doing. Presumably the head of the Dorrish clan expected that Miliss would be freed.

Rocquel's thought paused, a light dawning. Of course, in the trial of Miliss all the weaknesses of the prosecution's case—and the strength of the defense—would be

revealed whereupon all the various loopholes in the law would be rectified—at which time Dav would be tried and irrevocably convicted.

Rocquel stepped forward impulsively, and embraced Nerda.

"You're very brilliant," he said. "There's no question—I've got a very unusual and perceptive queen. Thank you."

He kissed her and was aware for the barest instant that she kissed him back. The action must have been involuntary. She broke the kiss and became passive.

Rocquel was not offended. In the back of his mind was the thought that Jana females were, perhaps, not as unemotional as was believed.

It might be worthwhile some day to conduct a deeper experiment.

Meanwhile—he had to warn Dav.

The next morning Rocquel learned that Miliss, who had been returned to custody on the formal charge of being a danger to the realm, was to be retried. Her attorney's plea at the preliminary hearing that afternoon was double jeopardy and the inapplicability of retroactive legislation.

The judge released her.

The prosecution requested and got a warrant for the arrest of Dav.

The evening paper reported that the arresting officers had failed to find the Earth man.

DAV spent the late afternoon in one of the hiding places of the

Reservoir of Symbols, planning his escape.

It was time for the kind of disappearance that Miliss and he in times past had occasionally had to undertake. There had been other Janae like Jaer Dorrish. They, too, had had their own remorseless purposes. Escape in those distant times had almost always consisted of their waiting somewhere for the particular enemy to live out his short life span.

Dav left his hiding place after dark and made his way through the brush. His destination was a certain hillside where, nearly seventy years ago, he had buried a small spaceship.

In years gone by, such long buried machinery had not always been readily located when needed—but this one had survived its seven decades totally free of unpleasant accidents. No bulldozer had nosed near it. No one had perched a building on top of it. The craft waited for him in its temporary grave.

Dav was carefully clearing away a particularly dense clump of tall shrubs when he heard a sound. Noiselessly he sank to the ground.

Too late. He heard a swift pad of footsteps in the dark. Two pairs of eyes glowed at him from beside some brush. Then strong, lean fingers had him pinned down.

The unmistakable long nose of a Jana male was silhouetted against the haze of city lights. A Jana female stood beyond him.

The deep voice of the male

said exultantly, "Got you. Perna, quick, come over here and turn a light on this spying rascal—" The words halted on a curse. "By Dilit, it isn't that scoundrel suitor of yours after all. Perna, bring that light, and let's see what we've got here."

There was silence except for the unhurrying footsteps of the female.

Dav lay unresisting. He could have taken steps. He could have reached up and, with the enormous strength that he could focus into any part of his body, with unerring fingers stabbed at the two vital nerve centers in the Jana to send the big male sprawling in agony. Or he could simply have contemptuously and effortlessly disengaged himself by a direct muscular thrust.

He did neither. As in past times, he was prepared to act defensively according to the need.

A blaze of light cut off his thought. The light beat pitilessly down on his upturned face. And then, the female's voice came, thick with disgust.

"Why, it's the man. So this is the kind of lover you protect me from. Bah!"

"Not so fast with your criticism," growled the male. "There's a reward. We can get married." His grip tightened on Dav. "Get up, you antique. It's time you and that woman ceased hanging on to life. Your kind is dead."

The moment for action had arrived but Dav did nothing. He offered no resistance as he was

jerked roughly to his feet.

In those moments, an astounding thing had happened.

He did not care.

His thought was: *Man's civilization is dead—why should Miliss and I be bound by the values of a society that has failed?*

The barriers he had erected against Miliss collapsed and a great guilt overwhelmed him. Suddenly he saw how rigid he had been as the dedicated savior of a new race.

In that prolonged moment of anguish something she had once said flashed in his memory.

I'm sure even your nose is getting a little longer. Pretty soon you'll even look like the Janae—"

He had lived in a dream, he saw now, a kind of self-induced hypnotism—an ideal which had given a temporary significance to an otherwise meaningless existence.

With Miliss doomed, nothing here was worth saving.

He went wordlessly with his captor.

THE news came to Rocquel in the small hours of the morning that Dav had been arrested. He left his bed, dressed, phoned Miliss.

"Have you had a visitor yet?"

"No. But I imagine he'll be here soon."

Rocquel said, "I'm coming right over."

He arrived by way of the secret entrance, and walked along a narrow, dim-lit corridor until he came to a closed door.

Voices sounded from beyond it.

Rocquel drew the door toward him and stepped through. He found himself in an alcove lighted by reflections from a bright room beyond a green and gold screen. The voices came from the other side of the screen. He recognized the calm bass of Jaer Dorrish and Miliss' indignant soprano.

"I'm surprised," Miliss was saying, "that you continue to pursue me despite the fact that you are probably personally programmed and may be in grave danger."

Jaer answered her with complete assurance, "I once allowed myself to be alarmed by such words. That will not happen again."

"What you're saying," said Miliss sharply, "is that you've abandoned reason."

"The Jana male," was the cool reply, "knows what is important. A female is. Motivations for fear are not." He chuckled lazily. "Let me reason out this situation for you. If you resist me you may be arrested again. But I may not even press charges against Dav if you give in. Who knows what privileges may continue for you two if you and I occasionally meet privately during the many, otherwise dull years ahead."

Rocquel stood there behind the screen and shook his head. Nerda's intuition was correct. This entire action against the human beings was simply a typical Jana male scheme in connection with a female.

He was not shocked. Or surprised, really.

Jaer said, "It is late, my dear. Surely you do not expect any other visitors this evening."

The remark made it the ideal moment for Rocquel to come out of his hiding place.

"**W**HAT I said to him," he told Nerda after he returned to the palace, "was, 'Jaer, if I'm going to surrender some of the prerogatives of the crown—it is because I believe you and others of the nobility, in exchange for greater political power, will give up the purely personal privileges of forcing individuals to yield to a lordly whim.'"

"And what did he answer?"

"Nothing. He turned and walked out of the room and out of the house."

Nerda made a distasteful gesture.

"If he can get rid of Dav, he'll count on eventually forcing Miliss to accept his protection."

"Then you think he will press charges against Dav?"

"Your words didn't reach him. He's still an old-style Jana male." She shrugged. "So, of course."

DAV sat apathetic throughout his trial. The defense attorney appointed by Rocquel could not even persuade him to testify on his own behalf.

He was convicted of being an alien spy and sentenced to be beheaded.

VII

BY THE time Rocquel's helicopter settled down on the big compound where the executions would take place the male nobility was milling around inside, cat-calling and gambling. The wagers usually consisted of someone's maintaining that he would win the chance to chop off the head of a convicted person.

Rocquel walked through the crowd of would-be executioners, hearing grumbling about the increasing shortage of criminal heads. He came to the roped-off area where the victims were guarded and saw what the problem was. Fewer than a hundred males, including Dav—and four females—were herded together at one end of an area that in the past had often held as many as five hundred.

Roughly one hundred heads were to be divided among nearly eighteen hundred eager young nobles.

Rocquel was handed the list of the doomed. Silently he scanned down it, looking for identifying comments. His attention caught two names. Their owners were classified as engineers. He scowled and turned to Jaer.

"What are valuable men like that doing on this list?"

Jaer held up a hand in a demanding way.

"Your majesty," he said in a formal tone. "I must call to your attention that you are violating the procedure of the new law. The king can no longer deal

directly with individual cases. As your prime minister, I will consult you or listen to your advice and, in some instances but not all, will recommend that you grant mercy. Please give me that list."

With a sinking sensation Rocquel handed it over. He had been intent on trying to save Dav and had automatically, as in times past, taken charge. He grew aware that the big male Jana was smiling satirically.

"As for your question, sire," Jaer said blandly, "the new law specifies that all persons are subject to due process and to similar penalties." He shrugged. "They killed. They were tried. The sentence was automatic."

"I see," said Rocquel.

What he saw most of all was that the noisy crowd would be against Dav and that he had no solution to his problem of how to save the human.

Jaer was speaking again.

"Would you like to have me single these males out for questioning, sire?"

The Jana prime minister's tone was tantalizing. He clearly felt himself in total ascendancy in this situation and was prepared to play hard at the game of constitutional monarchy. It seemed so obviously in his favor.

Rocquel nodded yes to the question. While the two doomed males were being located he consciously forced himself to remember his old way of dealing with one thing at a time. Presently he

was able to put the fate of the human being out of the forefront of his mind and concentrate his attention on the here and now.

THE scene that he was thus able to focus on was almost literally right out of old Jana. He saw everywhere the swishing silks of the nobles, a glinting ocean of changing colors. Each male's head was an elongated red shape that was visible at about the same height above the almost solid wall of silk. Eighteen hundred such heads made a picture of—oddly enough—innocent beauty.

But it was the beauty of a beast of prey, proud, arrogant, strong, untamed. It was as if a natural state of being were on display. The primitive impulses that still moved these males from violence to violence in a never-ending madness were the product of equally primitive necessities—their truth unquestioned on Jana until Dav and Miliss had begun to force self-control on an hierarchy that lived by the bloody law of supermasculinity.

I am looking, thought Rocquel, on the end of an era. Here, in these eighteen hundred, is embodied the last of the really feudal thing. . .

It had to go, of course. But how?

His thought ended as the two scientists were brought before Jaer. The Dorrish male glanced questioningly at Rocquel, who stepped forward. A moment later he was confronting their reality.

Professional scientists and all

technical personnel had received special treatment from the courts for many years. They were not let off totally free, as a noble might be, but were given a preferred status. A person with an advanced degree was proclaimed to be the equal of twenty ordinary persons. Possession of a secondary degree made him the equivalent of fifteen persons. And the lowest degree, ten. Technicians started at two and went up to nine.

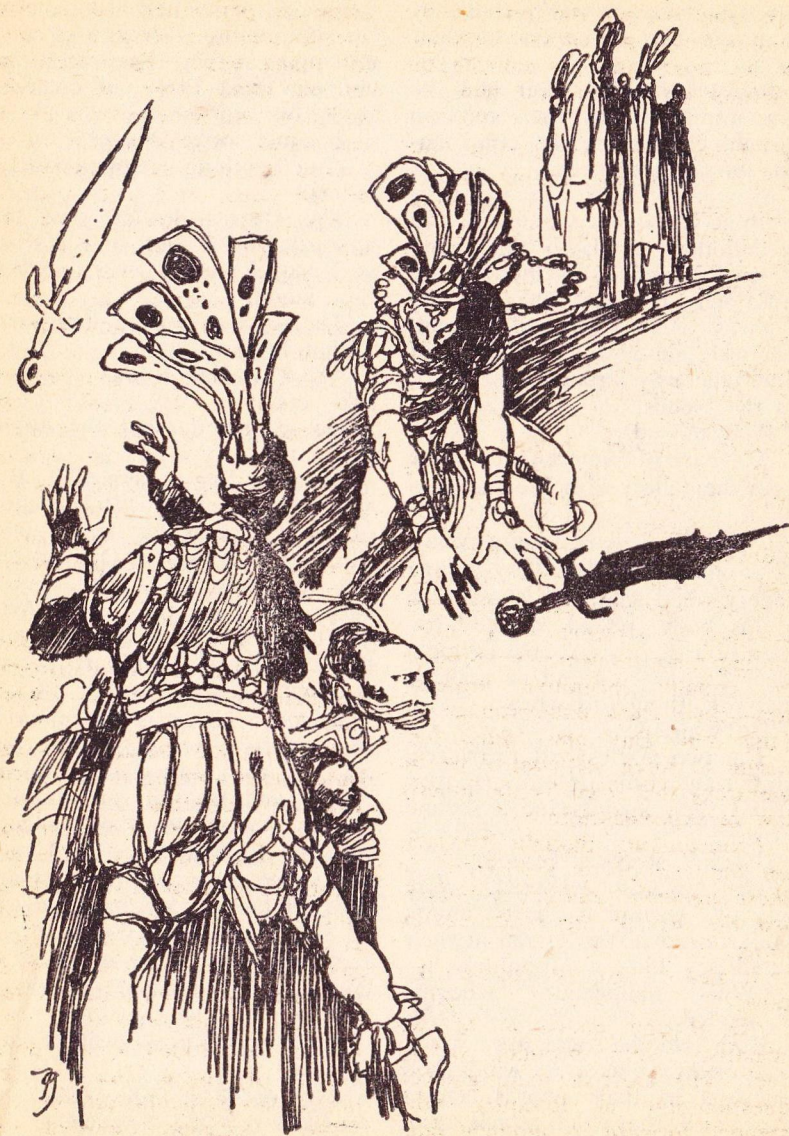
Thus a twenty-person engineer who killed a wholly non-professional individual suffered what was only a one-twentieth penalty—usually a fine. Only if he killed another scientist of a twenty-person status was he in serious danger of being executed. That was murder by law.

Jaer was speaking.

"Here they are, sire. I don't really see that we can do anything for them under the new regulations."

Rocquel had the same thought. But he said nothing as Jaer turned away and ordered the males to be brought closer. The two engineers came forward and were identified as, respectively, a fifteen and a ten. The former had killed in a fit of rage which—when his gag was removed—he earnestly protested had been a proper reaction to an insolent three. And the ten had killed a unit person in a fit of typical Jana male temper for no particular reason.

No occasion existed for favoritism. The new law must convince by its impartiality. The



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two were simply unlucky that they were the first examples of their class.

Rocquel nodded. Jaer had the gags replaced and then read in a loud, clear voice the confirmation of the sentences.

Moments later the lottery machine drew the names of the executioners. And, to the sound of much cursing on the part of those who had lost, the grinning winners came forward, simultaneously raised their swords and simultaneously struck at the heads on the blocks.

And missed.

A roar of amazement came from the gallery of noble Janae.

ROCQUEL was fighting a peculiar confusion. Something—some energy—had snatched at one side of his body, pulled at one arm, spun him slightly. At that moment the yelling started and he realized that something was wrong.

He whirled.

The two nobles had recovered. Muttering words of outrage, they raised their swords for a second blow.

"Wait!" Rocquel roared.

The swords wavered, were sullenly grounded. Two angry, embarrassed nobles glared at their hereditary king questioningly.

"What happened?" Rocquel demanded.

Both told the same story.

Something like a wind had snatched at their swords. Or it was as if they had struck at a blast of air so strong it had diverted their slashing blows.

Catcalls were beginning among the onlookers. Rocquel glanced unhappily at the prison compound and saw that Dav had come to the gate.

Rocquel spoke to Jaer.

"Let nothing happen till I return."

The Dorrish leader gave him a startled look but said nothing as Rocquel walked over to where Dav stood.

The human greeted him with: "What happened?"

"That's what I was going to ask you."

He explained what the nobles had said.

"Sounds like a symbol," Dav admitted, frowning. "But I know of none that is applicable in a situation such as this. Due process has occurred. There's nothing better on Jana right now. Why don't you have Jaer continue with the executions? Maybe it was an accident."

Rocquel, who was remembering the grabbing sensation that had affected his right side moments before and also on the morning of his return to Jana, silently doubted it. But he walked back to the executioners' blocks and ordered the two engineers released. That was the tradition.

"You forfeit your wagers," he curtly told the would-be executioners.

The two males walked off, cursing.

The order of procedure now required that the females be killed. One of the four was a poor little old thing who was quite

insane. She believed the crowd was present to fete her. It did not even occur to Rocquel to do anything for her. Jana had no place for insane people. They were invariably put to death if they became a burden—and a burden she was.

As Rocquel turned to consider the other females, he found his way barred by Jaer. The big male was shaking his head.

"Sire," he said, "you have been taking command again."

The truth was obvious. Rocquel shook his head.

He said with a twisted smile, "Giving up power seems to be quite a difficult process. So bear with me, Lord Jaer. I mean well."

No answering smile moved that grim countenance.

Rocquel thought, *what a remarkable man the ancient king on earth must have been who first agreed—when there were no precedents—to limit his absolute rights under a constitutional monarchy. . .*

At the moment he could not remember the name of that king, though Dav had told him.

What brought the historic precedent to mind was that, even now, Rocquel found it hard to adjust to the idea that what he gave up Jaer would gain. But finally Rocquel relaxed.

He stepped back.

"Continue, Lord of the Dor-rish."

He was able then to observe the scene once more without interference from his troubled inner self.

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Of the other three females, two were beyond anyone's power to help. They had been accused of adultery by their noble husbands and had been convicted. Rocquel privately doubted that the unnatural crime had occurred but this was not the time to take issue with a court's findings.

The remaining woman had denied the truth of religion. As she was brought before them, Jaer glanced questioningly at Rocquel. He evidently expected no interference, intended the glance to be a matter of form only.

He was turning away when Rocquel caught his arm.

The Dor-rish leader faced about with a tolerant expression. It became quite evident, as he listened to Rocquel, that on these minor matters he was prepared to allow the king the prerogative of granting mercy.

He finally said, "Sire, why don't I say that in this instance a reprieve will be granted and then you state the reasons."

That was the way it was done.

Rocquel spoke briefly to the assembled nobles, stressing the need—as Dav had urged upon him long ago—to keep religion humanitarian.

He spared her life.

HE STOOD by then, tense, not knowing what to expect as the three overjoyed winners came forward. The two who were assigned the adulterous females uttered expressions of pleasure at having the privilege of performing so necessary a task.

All three swords whipped high and came down as one.

The females had been kneeling fatalistically. They looked up after a little as if to ask what was wrong.

What was wrong was that the swords were lying a dozen feet away—Rocquel, who had watched closely, thought he had seen the glint of too much metal as the weapons had flown through the air. But he could not be sure. Something strong had grabbed at him as with fingers of steel and had moved him inches at the moment of attempted execution.

He saw that Jaer was lying on the ground nearby. Rocquel helped the big male to his feet.

"What happened?"

"This is magic," Jaer muttered. "Something hit me a terrific blow."

He seemed uncertain and offered no objection to Rocquel's suggestion that the executions should be temporarily halted pending an investigation.

"But what kind of investigation?" he asked in a bewildered tone.

Rocquel assured him that there was at least one person to question.

And so, after the women had been released and the second group of executioners dismissed, Rocquel had Dav brought out of the compound.

"You saw that?" he asked accusingly.

"Yes. There's no doubt. It's a symbol and the second time it was more violent. The power

behind it is increasing very rapidly."

"But what symbol can it be?" Rocquel protested. "I thought symbols were—" He stopped, remembering that he had no idea what symbols were. He finished lamely: "What do you suggest?"

Dav said, "The next time there may be feedbacks and the executioners may get hurt." He seemed interested. Some of the apathy he had displayed earlier seemed to be lifting. His eyes were suddenly bright. He looked around hopefully. "Why don't you let Jaer try to execute me? That would solve a lot of problems."

Rocquel frowned. He shook his head. Injury to—or the death of—the head of the Dorrish clan would merely create confusion in an important segment of the Jana populace.

THE catcalls were beginning again, demanding decisions. But the nobles sounded puzzled. The tone of the raised voices showed that the vocalizers were not clear as to what was going on. And only a percentage was actually yelling. It struck Rocquel that to the aristocratic onlookers the events at the focal point of the executions had probably been obscure.

Besides, no one had ever been able to explain anything, really, to Jana nobles as a group.

The fact that no help could be expected from the nobility made the situation even more difficult. Rocquel stood distracted, not knowing what to do. The yelling grew louder, more insist-

ent. Abruptly Rocquel realized why. By bringing Dav out of the compound he had given the impression that the human was next in line for execution.

And Dav's life was what those who cried out were demanding.

Dav was pale but yelled above the bedlam almost directly into Rocquel's ear, "Why not make the attempt? Let's see what happens."

Rocquel tried to answer back, tried to say, *What's going on? What's happening? Is the symbol I believed I had control of acting independently of my command—or any command at all?*

He couldn't say it. The words wouldn't come. His face contorted with his effort to speak.

Dav asked, "What's the matter, sire?"

Rocquel tried again to speak, could not. A degrading awareness overwhelmed him.

I'm programmed. I could tell Miliss about the symbol I controlled but I can't tell Dav. . .

Not—the realization suddenly was strong—that he had ever really controlled it. It had been attached to him somehow—but in the manner of a symbol it had reacted in this situation because this was what it related to.

"I feel," said Rocquel—and now the words came easily—"that these executions are not being allowed."

So he could speak if he made no direct reference to his symbol.

Dav was shaking his head.

"I don't understand it. The time is not yet on Jana for the end

of capital punishment. In fact—" He sounded appalled. He waved vaguely, his gesture taking in the horizon. "If a few million of those paranoid males out there ever get the idea that they cannot be executed all hell will break loose."

The picture of total disaster—of pillage, rape, and mayhem—evoked by the man's words, sent a chill through Rocquel. He visualized vast armies of criminals rioting in the streets, swarming in gangs through the country. Something had to be done at once.

Belatedly again he remembered that the Dorrish leader was in charge here and should be consulted. He swung about and became aware that the big male was standing off to one side, watching Dav from narrowed eyes.

Rocquel had time for only a glance—the seconds were flying by and the noise from the gallery was rising to such a crescendo that further conversation was impossible. Rocquel signaled the royal drummers to beat for silence.

Moments later he explained to a startled audience what Dav had said about a symbol's being involved.

When he had finished a loud voice, cried from somewhere in the crowd, "If we mob that so-and-so it'll end the nonsense."

Whoever spoke must have tried to push forward. A movement started. A dozen, then dozens, then hundreds surged forward.

A voice yelled in Rocquel's ear, "Run for your life—"

The tone was so urgent that Rocquel was a score of feet toward safety before he realized that it was Dav who had yelled at him. He stopped and turned—and was barely in time to see the disaster.

VIII

MALE bodies were being spun as if in a whirlpool. A fountain was already up in the air, being held and twisted by an invisible force.

From the corner of one eye he saw Dav frantically pushing through the retreating crowd toward him. The human broke through abruptly.

"Quick!" he yelled. "If they're whirled any higher, they may be hurt or killed when they fall."

Rocquel said blankly, "What do you mean—quick? Quick what?"

Dav's eyes, so bright for a moment, misted. A puzzled look came to his face.

He muttered, "What's the matter with me? I don't know why I said that."

But the real message of his reaction had penetrated. Rocquel was thinking, *He's programed, also...*

He felt the truth grow in him. It bothered him. Bothered him a lot. But the truth was that he was unquestionably watching the symbol over which he had been given control.

What was reassuring was the fact that in this decisive hour the ultimate decision had been left to the hereditary general of Jana—himself.

As he hastily evoked within his mind the mental pattern that would bring the Tizane energy to bear on the symbol, Rocquel thought, *It really doesn't take very much direct interference with individuals to control a planet with symbols. Only a few key persons...*

In the entire sequence of events the most unique facet was that both of the mentors—Dav and Miliss—had also not been allowed free will.

AFTER the whirlpool of noble Amales of Jana began to drop to the ground—where some lay for a long time—Rocquel suggested to Jaer that the executions continue.

The big male stared at him blankly.

"Your majesty," he said finally in amazement. "I doubt we could find a single person at this moment willing to act the role of executioner."

Rocquel was convinced of it. He worded his reply blandly. The decision to suspend executions must be made by the government and not by the constitutional monarch.

He added, watching Jaer closely: "I have a feeling that the government should also grant a pardon to Dav."

Those words got him, first, a dark, darting look. Slowly a crooked smile stretched across that normally grim face.

"Your majesty," said Jaer Dorrish, "let me refer to an earlier remark of yours. I have realized

today that you do mean well and that it is hard to give up power. Apparently it is almost as hard for a person like myself to accept an accretion of power gracefully—but I should like to assure you that it is my intention to try. I see the role of prime minister as one that will involve a great deal of integrity. So—” He made a gesture with one hand, said in a formal tone, “To prove to you that I have the intent of living up to that level of integrity, I hereby request in my capacity as leader of the government until the first election under the new law that you grant a reprieve and full pardon to Dav, the human.”

“I grant it,” said Rocquel.

It was a great victory—yet he experienced a sudden drop in spirits on the way home. He rode nearly a hundred yards with his motorcycle guard before he realized that he was having a more severe recurrence of an earlier feeling.

I'm programed and that degrades me. . .

Back in the palace, he told Nerda his feeling. All the rest of that afternoon and part of the evening, she argued with him.

Programing, she pointed out, was like a drop of chemical which might give to a flowing stream a slightly bluish tinge. Nothing but a dam could stop or divert the stream—yet after the injection of the chemical it was colored in a specific way.

Her analogy triggered a thought in Rocquel. His programing had

taken the form of accelerated civilizing of a paranoid male—himself. He was still hereditary general, still married to Nerda, with no intention of giving up either the position or the wife. Yet he had tolerated a change in the form by which he exercised his power, and he had accepted less total control over his wife.

And in neither instance did he feel a real loss.

Nerda suggested to him that the long-term programing of Miliss and Dav had been designed to make it possible for them to accept the unendurable existence of a lovely human couple marooned on an alien planet. And because the stream of life flowed immortally through them, they were separately programed as a man and a woman to survive periodic crises. So the great civilization out there controlled even its own emissaries.

In this generation, Nerda continued, perhaps only she and Rocquel would know the truth and, to a lesser extent, Jaer. The hereditary general and his wife, and the hereditary leader of the principal subordinate group, the Dorrish. But their own personalities remained overwhelmingly private. The stream of Jana identity flowed on in them—but it was now a more civilized being that felt the flow.

She must have realized from the accepting expression of his face and body that she could finally change the subject.

“Do you still have control of the symbol?” she asked.

It was night and they were standing at a huge window looking toward the slickrock mountains.

Rocquel imaged the first three stages of the Tizane pattern. Something grazed his leg. He knew a hackles-raising sensation—a sense of an energy field of enormous power.

Hastily he turned his thoughts aside.

"Yes," he said, "It's still there."

"In your presence," said Nerda, "no one can be killed—as long as you control that symbol. Did they say when they would take it away from you?"

Rocquel was about to make the same reply he had given to Miliss—when he realized that there was quite a different awareness in him. A barrier had lifted from his memory. He recalled exactly what he had been told.

"No," he said simply, "they just gave it to me. It's a lifetime gift."

He began to feel better.

In my presence, no one can be killed. . .

Suddenly he divined that his was a very advanced symbol indeed. He stood at a nearly unthinkable height of understanding and power.

Deep inside him something that was almost infinitely savage was mollified. Possessing what was surely one of the ultimate human symbols—he accepted his lesser than human status.

FOR Day it felt strange to be free. He walked slowly to a nearby restaurant and sat down

at a table. He was eating almost mindlessly when he heard the radio announce that he had been pardoned. The news struck him with an odd impact. The life force within him quickened.

He grew aware that the Janae in the restaurant were staring at him curiously. No one showed hostility.

He had no place that he wanted to go—so later he walked the streets. Finally he began to wonder.

Am I trying to solve a problem—and if so, what?

He could not decide. Everything seemed very far away.

He had a feeling that there was something he should be doing. But he did not know what.

Night came.

He waved a surface car to a halt. It drew up, its lights glittering, its bells clanging. No one said anything to him as he swung aboard.

Some younger Janae climbed on at the next stop. They sat giggling at him. But they rushed off into a brilliantly lighted park where hundreds of youthful Janae were dancing to the rhythm of a low, fast-tempo, sobbing music.

He continued his public exposure until almost midnight, without any untoward incidents. He returned to the white house by the river. As he entered the west wing he presumed Miliss was in her part of the residence. But he made no effort to contact her.

He slept the special deep sleep which triggered long-ago programming deep in his brain. Still

asleep, he went to a room that was deceptively equipped with what seemed to be ordinary Jana-level electronic equipment. But by pressing certain buttons and turning certain dials in a specific sequence Dav activated a communications system hidden in a remote part of the Jana planet.

Subspace radio waves thereupon transmitted a message to a receiver many light-years away.

The message was: "The crisis of the last stage of kings has passed—"

The message completed automatically, then repeated and repeated. Finally a relay was closed on the receiving planet by an accepting mind.

A voice—or a thought—said, "Message received, recorded."

A light flashed on in an instrument in front of Dav and, still asleep, he returned to bed.

MILISS had watched him first through scanners and then—as she realized his catatonic unawareness of his surroundings—by following him closely.

So that, as he turned away from the equipment, she stepped up to it and spoke to the distant listener. It was almost as if her communication were expected.

The voice answered, "We have come to a time when the woman—you—must know something of the truth."

"What is the truth?" Miliss asked. She did not wait for the reply but rushed on: Was there a universal death or was the idea

the result of early programing?

"At the next crisis," was the reply, "you will be allowed to visit—and see for yourself. Meanwhile, the man—Dav—must not be told. In fact, you will discover if you try that you cannot tell him."

"Why not tell him?"

It seemed that the reasons for that were deeply bound up in the godlike cravings of masculinity in the male and related idealistic motivations.

"And that's all we are allowed to say," concluded the faraway voice.

When the connection had been broken Miliss—feeling suddenly much better, even light-hearted, as if she were again somebody and not a living artifact of a dead culture; feeling strangely tender toward that poor, programed superbeing, her husband—began the long task of moving back into the west wing.

By morning she had most of her beautiful things in their proper locations. And so, when Dav awakened and turned over he saw a blond woman with a smile on her face—and a faint look of innocence as if everything she had done, including this return, had been totally rational.

This vision said to him, "I hope you'll be glad to know that you have a wife again."

On a planet where there is only one woman, and that woman beautiful, what could the only man say to that?


Dav said he was glad.

"Come over here," he said. ●

MARTIANS AND VENUSIANS

by Donald H. Menzel

This month's cover is timed to coincide with Mariner VI and VII flybys of Mars, intended to determine whether the Red Planet can support life. The artist, Dr. Donald H. Menzel, is Paine Professor of Practical Astronomy and Professor of Astrophysics, Harvard University; former Director, Harvard College Observatory; Research Scientist, Smithsonian Astrophysical Observatory. Is there life on the Red Planet?

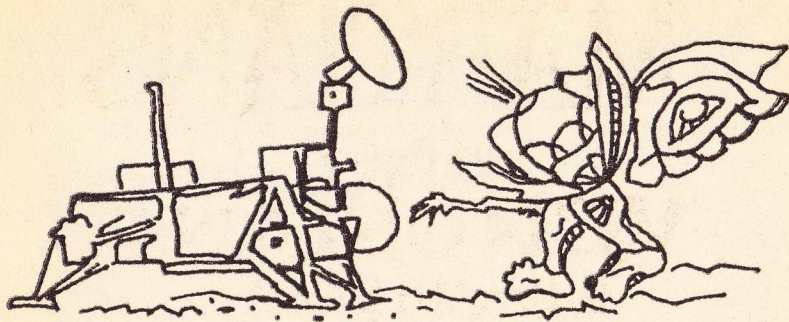
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SOME people have visions. Others hear voices. What the visions or voices signify nobody knows. Messages from the past? Portents of the future? Glimpses of other worlds? I wouldn't venture an opinion. I myself seem to make frequent contact with worlds and eras beyond our Earth.

I first became aware of this unusual ability about ten years ago, in March 1958, to be exact. I was sitting in a meeting of the Faculty of Harvard University. I had brought with me a tablet to record memoranda of decisions, especially those affecting the Observatory or the Department of Astronomy. And this meeting, devoted mainly to problems of Parietal Rules—those decisions affecting the hours when Harvard students may entertain female companions in their rooms—was incredibly dull.

At some moment during these boring deliberations I suddenly realized that my pencil, previously



engaged in aimless doodling, had now assumed control. Sweeping over the tablet, the pencil began to delineate mysterious beings, clearly not of earthly origin. They must have some planet to live on—and I eventually realized that most resided on Mars. But a few Venusians, Moon Beings and inhabitants of a planet revolving around Alpha Centauri revealed their existence also. Many of them, brightened with water colors, have become collectors' items. And only the most insensitive of my colleagues, those with no sense of artistic appreciation, refer to my work as "Doodles from Menzel's penzel."

More than a decade and some ten thousand spacemen later, I present herewith a few representative creatures from outer space.

THE cover illustration depicts a recurring theme, the Martian Cyclops, whose form does not in the least resemble that of the

mythical one-eyed giant who held Ulysses captive. The Martian creature is not a monster with one eye. It is a monster eye that clearly lives for vision alone—for the mere joy of viewing the rugged, cratered desert of the red planet. The large wings permit rapid flight.

The "holes"—which reveal the three-dimensional nature of the being—are characteristic of many space creatures. They function something like the gills of a fish, increasing contact with the environment.

The skating, dancing dinosaur lives in a checkered world, seeking satisfaction in the speed of Martian living. The dinosaur's skin is like smooth green leather, affording ample protection against the bitterly cold Martian winter nights. The polar caps of Mars, unlike those of planet Earth, are only a foot or two thick. But they nevertheless provide an excellent rink for skaters.

The progenitors of the female Martian dragon left the Moon millions of years ago as that body gradually lost its air and water into space. She finds the environment of Mars particularly friendly. Many of the plants on Mars are peripatetic. I am currently expecting a revelation concerning the nature of the offspring from this union.

The Venusian Beauty is a joy to behold. Her elaborate hair-do represents the traditional style of the females of that planet. Her outboard bust is entirely functional, the better to survive in the intense heat of the planet. Life, as recently noted by Professor Willard Libby, well-known Nobel Laureate, can exist only in the mild zone between the ice-capped poles and the broiling equatorial region. Note how the tail enhances her ethereal beauty.

On Earth, we have long believed that tailless man was higher in the evolutionary scale than the ape. We see how wrong we were in this supposition. Doubtless, as man ascends to greater heights he, too, will grow a tail.

The Martian Sea Horse is a friendly creature despite the fact that he is frozen stiff most of the time. But when the warmth of the Martian day unlocks the ice on the fringes of the polar cap the Sea Horse rapidly cavorts through the seas, conversing with every creature he encounters.

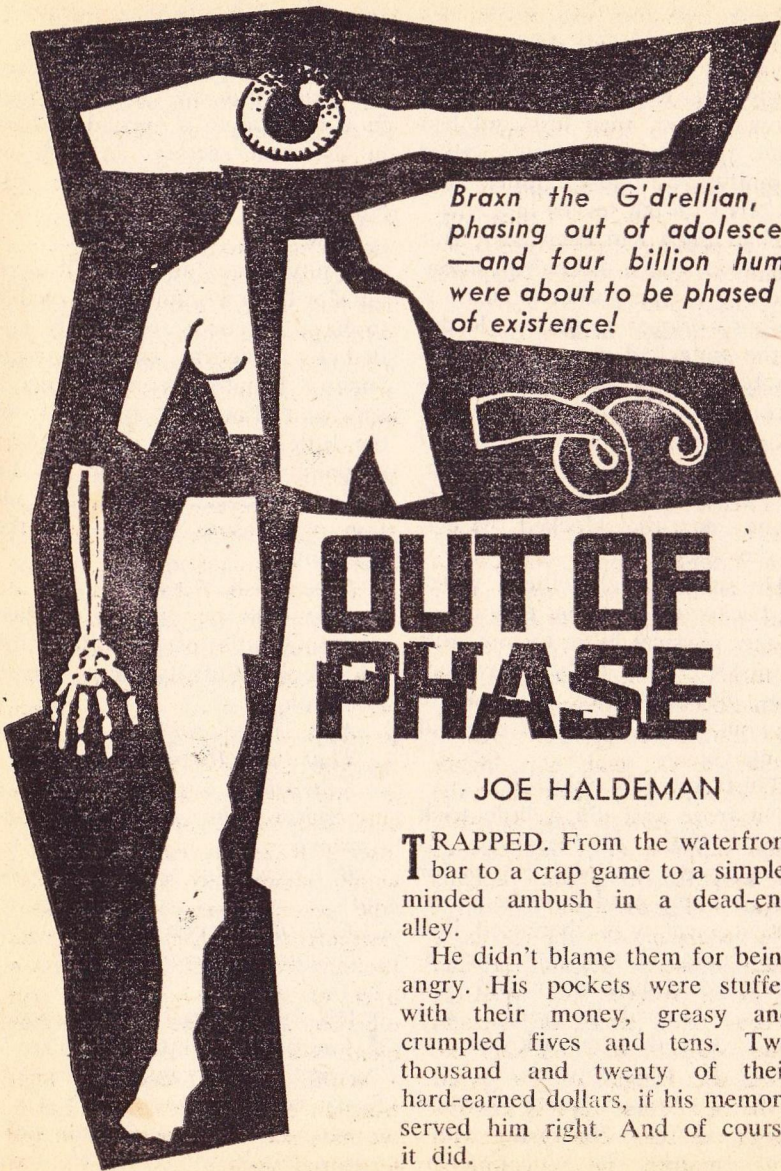
Here we see him discussing Martian politics with a friendly one-eyed Sea Slug. They have not yet decided for whom to vote. But every creature on Mars has the ballot.

The Martian Cloud represents a form unlike anything on Earth. We are accustomed to beings that are solid or liquid or a combination of both. However, although gases do enter life's processes in the form of oxygen or in varieties of waste products, we do not think of gases as living beings.

Enormous clouds develop on Mars. They express intelligence and have powers of locomotion. Terrestrial astronomers have frequently seen fast-moving clouds on Mars but have been at a loss to explain them. The speeding spots are enormous living creatures.

We complete this exhibit with two Martian birds. The Purple Bearded Night Owl, a denizen of the Martian night, flaps his wings in the thin, cold atmosphere and munches a meager meal of insects, while Phobos, the planet's nether moon, looks benignly on. The second bird, the Rainbow-Feathered Esophagus, welcomes the day with song. The rainbow hues of the plumage make this creature a welcome sight on the bleak Marscape.

Within a few decades, after Martian explorers return to Earth, we may see such creatures in our terrestrial zoos. ●



Braxn the G'drellian, was phasing out of adolescence—and four billion humans were about to be phased out of existence!

OUT OF PHASE

JOE HALDEMAN

TRAPPED. From the waterfront bar to a crap game to a simple-minded ambush in a dead-end alley.

He didn't blame them for being angry. His pockets were stuffed with their money, greasy and crumpled fives and tens. Two thousand and twenty of their hard-earned dollars, if his memory served him right. And of course it did.

They had supplied three sets of dice—two loaded, one shaved. All three were childishly easy to manipulate. He let them win every throw at first, then less and less often. Finally he tested their credulity and rapidly emptied their pockets with ten sevens in a row.

That much had been easy. But now he was in a difficult position. Under the transparent pretext of finding a bigger game, the leader of the gang had steered him into this blind alley, where five others were hiding in ambush.

And now the six were joined in a line, advancing on him, pushing him toward the tall hurricane fence that blocked the end of the alley.

He started pacing them, walking backward. Not that they could do any physical harm to him. But he needed time. Only thirty seconds, give or take a little, before he would back into the fence and be caught.

Thirty seconds objective . . .

He froze and did a little trick with his brain. All the energy his strange body produced, except for that fraction needed to maintain human form, was channeled into heightening his sensory perceptions, accelerating his mental processes. He had to find a way out of this dilemma without exposing his true nature.

The murderous sextet seemed to slow down as the ratio of subjective to objective time flux in-

creased arithmetically, geometrically, exponentially.

A drop of sweat rolled from the leader's brow, fell two feet in a fraction of a second, a foot in the next second, an inch in the next, a millimeter, a micron . . .

Now.

A pity he couldn't just kill them all slowly and painfully. Terrible to have artistic responsibility stifled by practical considerations. Such a beautiful composition; a spectrum of attitudes ranging from the little one's ill-concealed fear of pain, of inflicting pain, to the leader's leering, sadistic anticipation of pleasure in the kill—the dilettante!

A smallish work, only six to play on. Still, he ought to practice on some little pieces before the great epic. But it might arouse suspicion.

And Larval said . . .

That snail. Insensitive brute . . .

Next time out I'll get me a supervisor who is able to understand . . .

But next time out, I'll be too old . . .

Even now I can feel it . . .

Damn that snail!

THE ship hovered above a South American plantation. People looked at it and saw only the sky. Radar would never detect it. Only a voodoo priest in a mushroom trance felt its presence. He tried

to verbalize and died of a cerebral occlusion.

Too quick. Artless. Braxn was kind of ashamed of it.

"Bluntly, I wish we didn't have to use you, Braxn."

Llarval was talking.

His crude race communicated vocally and the unmodulated, in-and-out-of-phase thought waves washed a gravelly ebb and flow of pain through Braxn's organ of communication. He stored the pain, low intensity that it was, for contemplation at a more satisfactory time.

Llarval repeated: "If only we had brought someone else of your sort—besides your father, of course. Shape-changers aren't such a rarity."

He plucked out a cilium in frustration but of course felt no pain. Braxn was too close, sucked it in.

"A G'drellian poet. A poet of pain. Of all the useless baggage to drag around on a survey expedition—" Llarval sighed and ground his shell against the wall. "But we have no choice. Only two bipeds aboard the ship and neither of them is even remotely mammalian. And the natives of this planet are acutely xenophobic. Hell, they're omniphobic. Even harder to take than you, worthy poet. But this is the biggest find of the whole trip! The crucial period of transition—they may be on the brink

of civilization, still animals but rapidly advancing. Think of it! In ten or twenty generations they may be human and seek us, as most do."

The shapeless blob that was Braxn was turning a bored shade of green.

"We've met thousands of civilized races—more thousands of savage ones—but this is the first we've ever found in transition, correct? Ethnology, alien psychology, everything—" Llarval shuddered—"even your people's excuse for art, will benefit immeasurably."

Braxn had his doubts but he made no comment. He hadn't bothered to form a speech organ for the interview. He knew Llarval would do all the talking anyway.

But Braxn had been studying, under stasis, for several hours. Knowing exactly what needed to be done, he let most of his body disintegrate into its component parts and started to rebuild.

First the skeleton, bone by thousandth bone; the internal organs, in logical order, glistening, throbbing, functioning; wet-red muscle, fat, connective tissue, derma, epidermis smooth and olive, fingernails, hair, small mole on the left cheek.

Vocal cords, virgin, throb contralto: "Mammalian enough?"

"Speak Galactic."

"I said, 'Mammalian enough?' I mean, would you like them big-

ger—" she demonstrated—"or smaller?"

"How would I know?" snapped Llarval, trying to hide his disgust. "Pick some sort of statistical mean."

Braxn picked a statistical mean between the October and the November Playmate of the Month.

With what he thought was detached objectivity, Llarval said, "Ugly bunch of creatures, aren't they?"

About a hundred million years ago, Llarval's prehistoric ancestors had known one natural enemy—a race of biped mammals.

With a silvery laugh Braxn left to prepare for planetfall.

He got a kick, for the moment, out of being a "she."

BRAXN had studied Earth and its people for some ten thousand hours, subjective time. She knew about clothes. She knew about sex. She knew about rape.

So she appeared on Earth—on a dirt road somewhere in South America—without a stitch and without a blush. And her scholastic observations were confirmed in the field, so to speak, in less than five minutes. She learned quite a bit the first time, less the second. The third time, well, she was merely bored.

She made him into a beautiful—poem?

She made him into a mouse-sized, shriveled brown husk lying dead by the side of the road, his tiny features contorted with incredible agony.

She synthesized clothes, gray and dirty, and changed herself into an old, crippled hag. It was twenty minutes before she met another man, who...

Another dry husk.

Braxn was getting an interesting, if low, opinion of men, Bolivian farmers in particular. So she changed herself into one. The shoe on the other foot, she found, made things different but not necessarily better. Well, she was gathering material.

She waited for a car to come by, reverted to the original voluptuous pattern, disposed of the driver when he stopped to investigate, took his form and his car and started on a world tour.

BRAXN tried to do everything and be everyone.

He was in turn a doctor, lawyer, fencing coach. Prostitute, auto racer, mountain climber, golf pro. He ran a pornography shop in Dallas, a hot-dog stand at Coney Island, a death-sleep house in Peking, a Viennese coffee house, the museum at Dachau. He peddled Bibles and amulets, Fuller brushes and heroin. He was a society deb; a Bohemian poet, a member of Parliament, a *cul-de-jatte* in Monaco.

For operating expenses, when he needed small sums, he wove baskets, sold his body, dived for pennies, cast horoscopes.

Threw dice.

THE sweat drop had moved a hundredth of an inch.

Must stop wasting time but it's so hard to concentrate when it feels as if you had all the time in the universe . . .

Braxn knew that he could remain in this state only a few more minutes (subjective) before he was stuck in it permanently. On the ship he could spend as much time as he wanted in mental acceleration but here there was no apparatus to shock him out of it before trance set in. The trance would go on for more than a thousand years, such was his race's span of life. But to the six hoods he would age and die in a few seconds, reverting to his original form for an invisible nanosecond before dissolving into a small gray mound of dust.

He was seeing in the far infrared now and definition was very poor. He switched to field recognition. The dull animals confronting him had dim red psionic envelopes, almost completely washed out by his own, a crackling, stroboscopic violet.

Electromagnetic. The ion fog around the leader's watch glowed pale blue. Leakage from the

telephone and power lines made kaleidoscopic patterns overhead. His back felt warm.

Warm?

He switched to visual again and searched the people's eyes for reflections. There—the little scared one—his eyes mirrored the fence, the hurricane fence. Gate spaced with ceramic insulators.

He started to slow down his mind, speed up the world. The drop inched, fell to the ground with slow purpose; struck and flowered into tiny droplets.

Sound welled up around him.

“—on't have to use the gun.”

Braxn stumbled back toward the electrified fence, manufacturing adrenalin to substitute for his spent strength. His stomach knotted and flamed with impossible hunger. He received the pain and cherished it.

The leader advanced for the kill, bold and cocky, switchblade in his right hand, his left swinging a bicycle chain like a stubby lariat.

Braxn secreted a flesh-colored, rubbery coating over his body and, on top of that, a thin layer of saline mucus.

“Left-handed retiarius,” he mumbled under his breath.

The leader brought the chain around in a swift, flat arc, face-high. Braxn reached back and made contact with the fence.

The chain cracked Braxn high on the right cheekbone and whip-

ped around the back of his head, the end of it putting out his left eye. There was a low, sixty-cycle hum. His good eye saw the hood give one spastic jerk and crumple to the ground.

He looped the chain around the little one's neck and pulled him into the fence. Four to go.

They had backed away, somewhat bewildered. One took a step toward Braxn, faltered, then turned and ran. The others bolted and followed him.

Basking in the pain of his shattered face, Braxn leisurely reached out with his mind and sorted their garbled thoughts. Unfortunately all four had grasped the significance of his trick with the fence and none should be allowed to spread the tale, however unbelievable.

To buy time he stopped the blood flow to their brains temporarily. Each one collapsed before he reached the end of the alley. He carried them back and carefully arranged them around the fence. Carefully, for it was delicate work, Braxn erased their memories of the past few hours. He substituted the memory of an elaborate and vicious practical joke which ended with all of them being knocked unconscious by the charge from the fence.

All fixed up. But time enough for a special little treat for the leader, Cleve, who had caused him to go to all this trouble.

He studied the man's still figure. Dirty blond hair, low forehead, drooping moustache not quite hiding an unsightly mole at the corner of his mouth. Black leather shirt tight over flaccid muscles, beer belly, faded blue jeans tucked into black boots.

With little effort Braxn reddid his own exterior in the shape of Cleve. But he took the details, not from reality but from the twisted self-image in Cleve's dim brain.

Thus the biceps were a little larger, the face a little meaner than a lying mirror would reflect. Flat belly and hair blond almost to the point of whiteness. Instead of the ugly mole there was an incredibly virile scar that lanced down to his chin, catching the corner of his mouth down into an arrogant sneer. Grade-B movie syndrome.

He manipulated a couple of glands and the real Cleve woke up instantly. He caught sight of Braxn. His eyes narrowed and he rose slowly to his feet. He kept his distance and stared.

Sure of Cleve's attention, Braxn started his performance.

The strong, manly face blurred for an instant and came back into focus. The scar was a puffy, infected seam that defiled a face no longer vigorous or handsome. It pulled down the lower lip to expose a yellow canine. The face was lined with a delicate tracery

of worry and pain, the grooves growing deeper and more complex in front of Cleve's horrified eyes.

The hair, sprinkled with gray, grew white and was gone except for a dirty stubble on the twisted, knobby chin. Face and body wasted away. Wrinkled parchment stretched tight over a leering death-mask.

Bloodshot eyes clotted with rheum. Cataracts clouded and blinded them. The lids closed and collapsed inward and the body—real only in the minds of two disparate creatures—was mercifully dead.

The skin turned gray, then olive, and released its life-grip on the ancient body. The body puffed up again in macabre burlesque of its younger brawn. It lived again for a short time as maggots fed on its putrescence.

Then a dry, withered husk, still standing upright. The last vestiges of skin and flesh sloughed off to reveal a brown-stained skeleton filled with nameless cobwebs. It collapsed with a splintering clatter.

On top of the pile of gray dust and bones the yellow skull glared balefully at Cleve for a long moment and then, piece by piece the whole grisly collection started to reassemble itself.

Cleve had been trying to scream for nearly a minute. Finally he let out a little squeak and fainted.

Braxn made sure he would be

out for a while, then erased from Cleve's memory the specific details of the experience. He left only a gnawing, undirected feeling of horror.

He scanned the silent forms around him and found that they were all still unconscious. One, the little one, was dead. Probing further, Braxn dissolved a blood clot, patched an infarction and shocked the still heart back into action. Pity to spoil good art. He liked the combination of cause-and-effect and dumb luck causing only the harmless one to die. Survival of the fittest, eugenics will out, and all that. With a mental shrug Braxn walked off to find a cab.

"OH, ENTER, by all means." Larval slipped into the Survey Chief's cabin with trepidation. He was in for a bad time.

The Chief, who looked like a cross between a carrot and a praying mantis, got right to the point.

"Larval, your reports stopped coming in several cycles ago. From this I infer that A) your scout is dead, not likely; B) he got disgusted with your asinine questions and lectures, rather more likely; or C) he went on one of his blasted binges and is busily turning the autochthones into quatrains and limericks. I find this last alternative the most probable, if the least palatable.





He is a G'drellian, an adolescent at that. Do you know what that means?"

"Yes, sir. That means he's in the aesthetic stage of hi—"

"It means he should have been locked up before we got within a parsec of this primitive world. You should not have sent him down on the surface of this world alone, least of all without consulting your captain. You may be—you may have been—in charge of ethnological research but certain decisions are not

implemented without my okay."

"But, sir, after his initial experiments he stopped killing them. I made him stop. He might have drawn attention to himself."

"Your devotion to objectivity is most commendable.

"Thank you, sir."

"It shows that you know and appreciate the first rule of contact." He pressed a stud and one wall became transparent. He gestured at the busy scene beneath them. "Are they aware of our presence?"

"Of course not, sir. That is the first rule."

"Tell me, Llarval. What sort of radiation would you suppose their eyes are sensitive to?"

The captain's addiction to obliqueness was most exasperating.

"Well, sir, since their planet goes around a yellow star, their organs of vision are most sensitive to a narrow band of radiation centered around the yellow wavelengths."

The captain scraped his thorax with a claw. Llarval interpreted this as applause. His race had forgotten sarcasm eons before the captain's had invented fire.

"You are a good study, Llarval."

"Thank you, sir."

"So we make the ship transparent to these wavelengths at great expenditure of power."

"Yes, sir. So the natives' development won't be influenced by premature knowledge of—"

"And with similar expenditure of power we extend this transparency down to the longer wavelengths. Why do we do this, Llarval?"

The little ethnologist was perplexed. Even the lowliest cabin boy could answer these questions.

"Why, of course, sir, it's to make the ship invisible to radar detection. Only it's not really invisible. It's just that the local implicit coefficient of absorption becomes asymptotic with —"

"Llarval." The captain sighed. "I learned one of those creatures' words the other day. I suppose by now you've run into it also—catechism."

"Yes, sir." Llarval squirmed.

"Now as far as I can tell, though I'm not a man of learning myself, this is a form of stylized debate. One person asks a series of questions. The answers are so simple that they brook no disagreement or misinterpretation. These answers—forced, as it were, upon the hapless interrogatee—lead to an inevitable conclusion, which gains a spurious validity through sheer tautological mass. Is that fairly accurate?"

Llarval paused for a second to retrieve the sentence's verbs as the captain had mischievously, if appropriately, switched from English to Middle High German.

"Yes, sir. Very accurate."

"Well, then." The captain gave a gleaming, metallic smile. "To borrow another of their delightfully savage concepts, the *coup de grace*. How did we know—long before we came within range—?"

"Radio broadcasts, sir, and television."

"Which means?"

"Sir, I'm aware of —"

"You're aware of the fact that our arty friend could gain control of this planet-wide network and, in a matter of seconds, destroy almost every intelligent being on the planet. Or perhaps worse,

reduce them to gibbering animals. Or worse still, increase their understanding of themselves beyond the threshold —”

“Yes, sir.”

Llarval could fill in the blanks.

“Then, get out of here and let more capable minds deal with the situation.”

“Yes, sir.”

The ethnologist started to scuttle toward the door.

“And, Llarval—remember that your captain, like most of the members of this expedition, normally communicates mind-to-mind and receives your surface thoughts even when they are not verbalized.”

“Yes, sir,” he said meekly.

“Your captain may be a ‘pompous martinet,’ yes, but really, Llarval—‘a vegetable that walks like a man?’ Racism is, I think, singularly inappropriate in an ethnologist. Make an appointment with the psychiatric staff.”

“Yes, sir.”

“And on your way down, check at the galley and see if Troxl has a couple of years’ work for you to do.”

The captain watched the disconsolate creature scurry out. He settled down at his desk. He passed a claw over a photosensitive plate.

Computer, he thought.

Here, Captain. . .

Where the hell is that G’drellian poet?

The machine thought a low hum.

I can't find him. He must be generating a strong block. You know a G'drellian can synthesize dummy thought waves exactly out of phase with his natural pattern. And by combining the two patterns . . .

How do you know he isn't just on the other side of the planet?

The captain sighed. A computer will talk on one subject forever, if you let it.

Using the planet's satellites as passive reflectors, I can cover ninety percent or more of the planet's surface. And by integrating the fringe effects from . . .

I believe you, I believe you. Then tell me—where is his old goat of a father?

Meditating in the meat locker—in the form of a large stalactite. As he has been, I might add, ever since you . . .

All right. Have Stores send me up a winter outfit. I'll have to go and try to blackmail him into telling me where his blasted progeny is.

Give him a thousand witless ethnologists, thought the captain to himself. Give him a thousand garrulous computers but spare him the company of even one G’drellian. Even on G’drell they confined the adolescents to one island—to work out their poetry on worms and insects and each other.

A survey expedition needed a G'drellian, of course. A mature one to solve problems beyond the scope of the computer. But damn that Brohass! He must have known he was gravid when he volunteered for the trip. How did one deal with these creatures, who seem to live only to torment other people with their weird, inscrutable sense of humor? Brohass knew he would undergo fission, knew his offspring would reach adolescence in mid-voyage—and probably contrived to send the ship to a planet where . . .

The captain's reverie was broken by the robot from Stores.

"The clothing you requested, sir."

"Just put it on the hook there."

The robot did so and glided out of the room.

He should have had it delivered to the locker, thought the captain. Clothing was tantamount to obscenity to many of the crew members and one had to maintain dignity.

Yes, one must, mustn't one? thought the computer.

Will you go do something useful?

The captain threw up a block in time to miss the reply. He jerked the clothes off the hook and strode out of the cabin, letting out occasional thoughts about the ancestry, mating habits, etc., of the machine that was the ship's true captain.

"**F**ASTEN your seat belts, please." The slender stewardess swayed down the aisle, past a young man with a handsome, placid face and a Brooks Brothers suit. "Landing at Kennedy International in three minutes."

Braxn did as told, shifting the heavy attaché case from his lap to the floor. Two hundred pounds of gold bullion would buy a lot of prime time.

They landed uneventfully. Braxn took a helicopter to the Pan American Building, went down to the 131st floor and into an office. Gold leaf on the frosted glass entrance proudly proclaimed Somebody, Somebody and Somebody, Advertising Counselors.

He came out two hundred pounds lighter, having traded the gold for one minute of time—at nine Saturday night, an hour away—on each of the major television and radio networks. A triumph of money over red tape. His commercial would be strictly live, with no chance of FCC interference. And his brand of soap would certainly make the world a cleaner place to live in.

Alone.

THE captain donned his thermal outerwear and entered the massive locker. Sure enough, there was a huge blue stalactite suspended from the ceiling. He addressed it.

Brohass, he thought obsessively, *would you serve your captain?*

The huge icicle fell and splintered into several thousand pieces. They reassembled into a creature who looked rather like the captain.

"What would you do to me if I said no?"

"That's ridiculous," said the captain, somewhat emboldened by facing a familiar shape. "No one can do anything to harm you."

"All right, that settled, will you please go and let me get back to my conversation."

Curious in spite of himself, the captain asked, "Whom are you conversing with? You don't generally think with the other crew members."

"My father has found a particularly humorous ninth-order differential equation. He is explaining it to me and I would like to devote all of my energy to understanding."

The captain shivered, not just from cold. Brohass' father had been dead for thirty years. But half of him would live as long as Brohass lived—a quarter would live as long as Braxn. And so on down the line. It was unsettling to mere mortal beings, that a G'drellian maintained an autonomous existence within his descendants for hundreds of thousands of years after physical death. Whether a G'drellian would ever

die completely was problematical. They claimed that none yet had.

"This won't take much of your time. I want you to locate Braxn and give him a message."

"Why can't you find him yourself?"

"It's a rather large planet, Brohass, and he's thrown up a strong communication block."

"We're on a planet? Which one?"

The captain thought a long string of figures. "They call it Earth."

"I'm afraid I'm unfamiliar with it. Please open your mind and let me extract the relevant details."

The captain did so, with chagrin. Brohass could easily have asked the computer but his people were born voyeurs and never would pass up the chance to probe another's mind.

"Interesting, savage—I can see why he was drawn to it. Incidentally, your treatment of Llarval was shameful. In his place you would have lost control of my son just as quickly. And your knowledge, Captain, of the people on this planet, is encyclopedic but imperfect. You misunderstand both catechism and tautology. You used the expression *coup de grace* where *coup de theatre* would have been more fitting. And your Middle German would send a Middle German into convulsions. Furthermore, you *are* an

ambulatory vegetable. To your credit, however, you were correct in assessing my son's plans. He is now in the possession of a minute of time, as they say, on the planet's communications network. Funny idea, that—beings possessing time rather than the other way arou—”

“Brohass!”

“Captain?”

“Aren't you going to do anything?”

“Interfere with my child's development?”

“He's going to kill four billion entities!”

“Yes—he probably is. Mammals, though. You have to admit they'd probably never make anything of themselves anyhow.”

“Brohass, you must stop him.”

“I'm pulling your spindly leg, Captain. I'll talk to him. Just once, just once I would like to have a captain who could take a joke. You know, you vegetable people are unique in the civilized universe in your —”

“How much time do you have?”

“Oh, two thousand three hundred thirty-eight years, four days and —”

“No, no—how much time before Braxn gets on the air?”

“If Braxn got on the air he would fall to the ground—even as you and I.”

The captain made a strangling noise.

“Oh, don't bust a root. I have several seconds yet.” Brohass reverted to his native formlessness and sent a tendril of thought through his son's massive block.

BRAXN. *This is your father. Will you slow down just a bit?*

Braxn concentrated and the bustling studio slowed down and froze into a tableau of suspended action. *Yes, Father. Is there something I can help you with?*

Well, first, tell me what you're doing in a television studio.

At the minute of maximum saturation I'm going to broadcast the Vegan death-sign. That's all.

That's all? You'll kill everybody.

Well, not everybody. Just those who are watching television. Oh, yes, I've worked out a phonetic equivalent for simultaneous radio transmission. Get a few more that way—if it works.

Oh, I'm sure you can do it, son. But, Braxn, that's what I wanted to think to you about.

You're going to try to think me out of it.

Well, if you want to put it that way. . .

I bet that joke of a captain put you up to it.

You know that vegetable that walks like a man. . .

Hey; that's a good one, Father. When'd you. . .

Neither he nor anyone else on this tin can could make me do

anything that I... Brohass sighed. Look, Braxn. You're poaching on a game preserve. Worse, shooting fish in a barrel. With a fission bomb, yet. How can you get any satisfaction out of that?

Father, I know that quantity is no substitute for quality. But there are so many here!

Brohass snorted.

And you want to be poet laureate, right?

There's something wrong in that? This will be the biggest epic since Jkdir exterminated the...

Braxn, Braxn—my son. You're temporizing. You know what's wrong, don't you? Surely you can feel it.

Braxn fell silent as he tried to think of a convincing counter-argument. He knew what was coming.

The fact is that you are maturing rapidly. It's time to put away your blocks—sure, you can go through with this trivial exercise. But you won't be poet laureate. You'll be dunce of the millennium, prize buffoon. You're too old for this nonsense. I know it, you know it and the whole race would know it eventually. You wouldn't be able to show your mind anywhere in the civilized universe.

He knew that his father was thinking the truth. He had known for several days that he was ready for the next stage of development but his judgment was blinded by

the enormity of the canvas he had before him.

Correct. The next stage awaits you and I can assure you that it will be even more satisfying than the aesthetic. You have a nice planet here and you might as well use it as the base of your operations. The captain is easily cowed—after I assure him that you no longer wish to, shall we say, immortalize these people in verse, he'll be only too glad to move on without you. We'll be back to pick you up in a century or so. Goodbye, son.

Goodbye, Father.

The filament of the green light on the camera facing him was just starting to glow. He had something less than a hundredth of a second.

Extending his mental powers to the limit, he traced down every network and advertising executive who knew of the deal he had made. From the minds of hundreds of people he erased a million memories, substituting harmless ones. Two hundred pounds of gold disappeared back into thin air. Books balanced.

Everyone in the studio had the same memory: five minutes ago a police-escorted black limousine screeched to a halt out front, and this man, familiar face lined and pale with shock, stormed in with a covey of Secret Service men and commandeered the studio.

Braxn filled out his face and

body with paunch. The man who owned this face died painlessly as soon as Braxn had assimilated the contents of his brain. The body disappeared. His family and associates "remembered" that he was in New York for the week.

A finger of thought pushed into another man's heart and stopped it. Convincing—he was overworked and overweight, anyhow. But to be on the safe side, Braxn adjusted his catabolism to make it look as if he had died ten minutes earlier. He manufactured appropriate cover stories.

All this accomplished, Braxn let time resume its original rate of flow.

The light winked green.

A voice offstage said, "Ladies and gentlemen—" what else could one say?—"the, uh, Vice President of the United States."

Braxn assumed a tragic and weary countenance.

"It is my sad duty to inform the nation . . ."

NINE phases in the development of a G'drellian from adolescence to voluntary termination.

The first phase is aesthetic, appreciation of an art alien to any human, save perhaps a de Sade or a Hitler.

The second phase is power. ●

THE MARTIAN SURFACE

*With feet upon this crater-pitted land
So like the moon, with eyes upon the void,
We might with effort glimpse an asteroid
At dim remove; below us in the sand
Grow sturdy roots, defiant as a band
Of outlaws: beaten back though not destroyed,
They fight, with strength and doggedness alloyed,
Against the blows of Nature's brutal hand.*

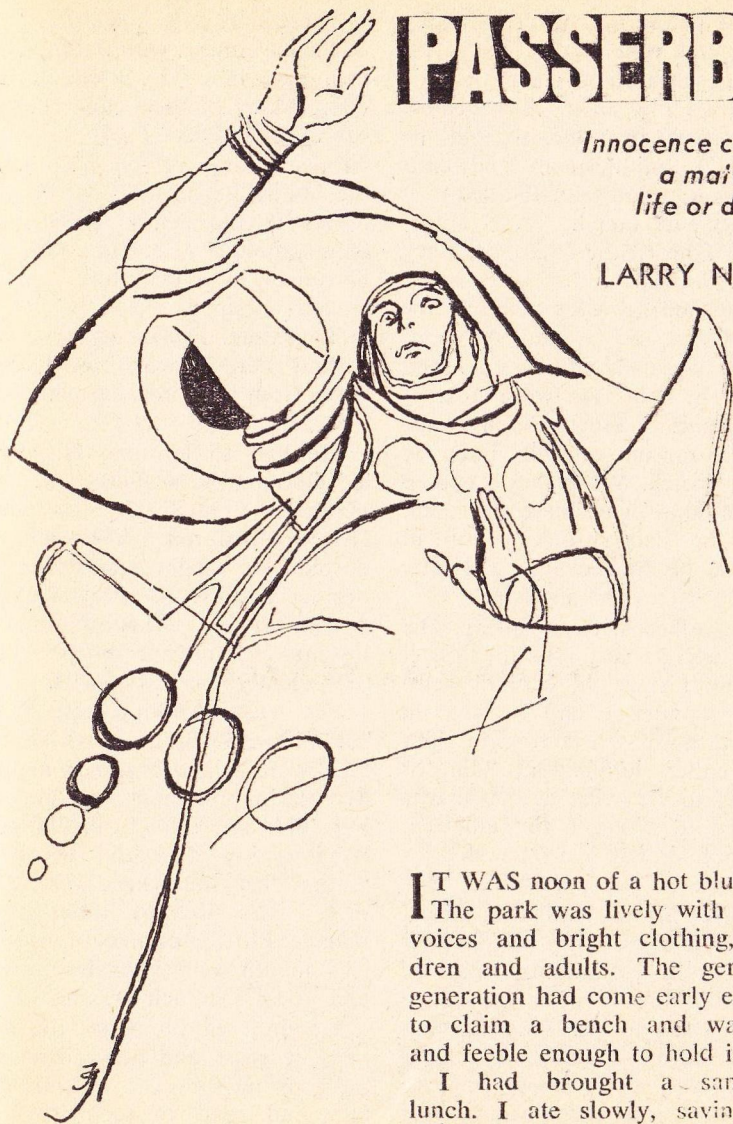
*The huge extensive caps that melt and freeze
Lend moisture to the dusty atmosphere,
And spur the efforts of the shrubs to grow;
In pools of melted ice perhaps appear
Scant forms of protozoan life that seize
A transient space between the months of snow.*

—Wade Wellman

PASSERBY

*Innocence can be
a matter of
life or death!*

LARRY NIVEN



IT WAS noon of a hot blue day. The park was lively with raised voices and bright clothing, children and adults. The geriatrics generation had come early enough to claim a bench and was old and feeble enough to hold it.

I had brought a sandwich lunch. I ate slowly, saving out an orange and a second can of beer for later. The populace

danced before me, never dreaming that I was watching.

The afternoon sun burned warm on my scalp. A lizardlike torpor stole over me, so that the sound of adult voices and children's screaming-for-the-hell-of-it dimmed and faded.

But I heard the footsteps. They jarred the earth.

I opened my eyes and saw the rammer.

He was six feet tall and massively built. He wore a scarf and a pair of blue balloon pants, not too far out of style, but they didn't match. What they exposed of his skin was loose on him, as if he had shrunk within it. Indeed, he looked like a giraffe wearing an elephant's skin.

He walked without spring. His feet slapped hard into the gravel with all his weight behind them. Small wonder I had heard him coming. By now everyone in sight was either looking at him or turning to see what everyone was looking at. Except the children, who had already lost interest.

To me he was irresistible.

There are always the casual peoplewatchers. They watch their neighbors in restaurants, shops or monorail stations when they have nothing else to do. They develop their own amateurish technique—they don't know what to look for and they usually get caught. But I'm not that kind of peoplewatcher.

There are the fanatics, the dedicated ones, who learn their technique in a closed-circuit TV class. Many of them hold lifetime subscriptions to *Face In The Crowd* and *Eyes Of The City*, the hobby magazines. They write letters to the editor telling how they spotted Secretary-General Haruman in a drugstore and he looked unhappy.

That's me. The fanatic type.

And here I was, not twenty yards from a rammer, a man from the stars.

He had to be one. His taste in clothing was odd and his carelessly draped skin was alien. His legs had not yet learned to cushion his weight against Earth's heavier gravity. He projected the discomfort and self-consciousness, the interest, surprise and pleasure, that silently shouted *tourist*.

His eyes, looking out from behind the ill-fitting mask of his face, were bright, blue and happy. My staring rudeness was noticed but did not affect his almost religious joy. Nor did his feet, though they must have hurt. His smile was dreamy and very strange. Lift the corners of a spaniel's mouth with your forefingers and you'd see such a smile.

He drew in life from the sky and the grass and the voices and the growing things. I watched his face and tried to read it. Was he the priest of some new Earth-worshipping religion? No. Prob-

ably he was seeing Earth for the first time, was tuning his biorhythms to Earth for the first time, feeling Earthweight settle into his bones, watching sunrises twenty-four hours apart until his very genes told him he was home.

It made his day when he saw the boy.

THE boy was around ten, a handsome child, naked and tanned all over. When I was growing up even the infants wore clothing in public. I had not noticed him until now and he in turn had not noticed the rammer. He kneeled on the path that passed my bench, his back toward me. I could not see what he was doing but he was very intent and serious about it.

By now most of the passersby had turned away—from disinterest or an overdose of good manners. I eyed the rammer watching the boy. I studied him from half-closed eyes, practicing my famous imitation of an old man asleep in the sun. The Heisenberg Principle implies that no peopewatcher should allow himself to be caught at it.

The boy stooped suddenly, then rose, his hands cupped. Moving with exaggerated care, he turned from the gravel path and crossed the grass toward a dark old oak.

The rammer's eyes went big and round. All his pleasure gave way to horror and then the horror

drained away, leaving nothing. The star-man's eyes turned up in his head. His knees began to buckle.

Stiff as I am these days, I reached him. I slid an admittedly bony shoulder under his armpit before he could fall. All the mass of him came gratefully down on me.

I should have folded like an accordion. Somehow I got the rammer to the bench before I had to let go of him.

I told an astonished matron, "Get a doctor."

She nodded briskly and waddled away. I turned back to the rammer.

Sick eyes looked up at me from under straight black bangs. The rammer's face was oddly tanned—dark where the sun could reach, white as milk where folded skin cast shadows. His chest and arms were like that too. Where the skin was pale it had paled further with shock.

"No need for doctor," he whispered. "Not sick. Something I saw."

"Sure. Put your head between your legs. It'll keep you from fainting."

I opened my remaining beer.

"I will be all right in a moment," he said from between his knees. He spoke the Tongue oddly and his weakness further slurred the words. "It was the shock of what I saw."

"Here?"

"Yes. No. Not entirely—"

He stopped to shift mental gears and I handed him the beer. He looked at it as if wondering which end to suck on, then half-drained it in one desperate draught.

"What did you see?" I asked.

He had to finish swallowing.

"I saw an alien spacecraft. Without the spacecraft it would have meant nothing."

"What kind of ship was it? Smithpeople? Monks?"

These are the only known spacegoing races, aside from ourselves. I'd never seen one of their ships but they sometimes docked on the outer worlds.

The rammer's eyes narrowed in his quilted face.

"I see. You think I speak of some registered alien ship in a human spaceport." His words were no longer slurred. He picked them with care. "I was halfway between the Horvendile and Koschei systems, shipwrecked at the edge of lightspeed, waiting to die. And I saw a golden giant walking among the stars."

"A humanoid? Not a ship?"

"I—thought it was a ship. I can't prove it."

I made a thoughtful, wordless sound, unwilling to commit myself but letting him know I was listening.

"Let me tell you. I was a year and a half out from Horvendile,

bound for Koschei. It would have been my first trip home in thirty-one years..."

FLYING a ramship under sail is like flying a spiderweb.

Even with the web retracted a ramship is a flimsy beast. Cargo holds, external cargo netting and hooks, pilot cabin, life-support system and the insystem fusion motor are all contained in a rigid pod barely three hundred feet long. All else is balloons and webbing.

At takeoff the balloons are filled with hydrogen fuel for the insystem fusion motor. By the time the ship reaches ramscoop speed the fuel is half gone, replaced by low-pressure gas. The balloons are retained as meteor shielding.

The ramscoop web is superconducting wire, thin as spiderweb, tens of thousands of miles of it. Coiled for takeoff, it forms a roll no bigger than the main pod. Put a uniform negative charge on it and it spreads to form a hoop two hundred miles across. It ripples at first under the differentiating fields.

Interstellar hydrogen, thin as nothing, enters the mouth of the ramscoop web. An atom to a cubic centimeter. Differentiating fields compress it along the axis, compress it until it undergoes fusion. It burns in a narrow blue flame, yellow-tinged at the edges.

The electromagnetic fields in fusion flame begin to support the ramscoop web. Mighty forces add, making web and flame and incoming hydrogen one interlocking whole.

A rigid pod, invisibly small, rides the flank of a wispy cylinder of webbing two hundred miles across. A tiny spider on an enormous web.

Time slows down, distances compress at the higher velocities. Hydrogen flows faster through the web—the ramscoop fields increase in power. The web becomes more rigid, more stable.

A ship should not need supervision as it approaches the midpoint turnover.

"I was halfway to Koschei," said the rammer, "carrying the usual cargo—genetically altered seeds, machine prototypes, spices. And three corpsicles—passengers frozen for storage. We carry anything that cannot be sent by message laser.

"I still don't know what went wrong. I was asleep. I had been asleep for months, with a current pulsing through my brain. Perhaps a piece of meteoric iron entered the ramscoop. Perhaps the hydrogen grew thin for an hour, then thickened too fast. Perhaps we entered a sharply bounded OH+ region. In any case something twisted the ramscoop field and the web collapsed.

"I was wakened too late. The

web had roman-candled and was trailing the ship like a parachute that will not open. Wires must have touched for much of the web was vaporized.

"It was my death," said the rammer. "Without the ramscoop web I was falling helplessly. I would enter the system of Koschei months too early, moving at nearly lightspeed, a dangerous missile. For my honor I must inform Koschei by laser—so that I might be shot down before I arrived."

"Take it easy," I soothed him. His jaw had clenched, and the muscles that tightened in his face patterned the skin like a jigsaw puzzle. "Relax. It's all over. Smell the grass—you're on Earth now."

"I wept helplessly at first, though we consider weeping unmanly." The rammer looked around him as if coming awake. "You are right. Would the law take offense if I took off my shoes?"

"No."

He took off his shoes and wiggled his toes in the grass. His feet were too small for him. His toes were long and agile, almost prehensile.

NO DOCTOR had appeared yet. Probably the matronly woman had simply walked away to avoid being involved. In any case, the rammer's strength had returned.

He said, "On Koschei we tend to large girth. Gravity pulls less

heavily at the meat of us. To qualify as a rammer I sweated away half my body weight, so that the unneeded two hundred earthweight pounds of me could be replaced by payload cargo."

"You must have wanted the stars badly."

"Yes. I was simultaneously learning disciplines whose very names most people can neither pronounce nor spell." The rammer pulled at his chin. The quilted skin stretched incredibly and did not snap back immediately when he let go. "I cut my weight by half, yet my feet hurt when I walk the Earth. My skin has not yet shrunk to fit my smaller mass. Perhaps you noticed."

"What did you do about Koschei?"

"I sent the message. It would precede me to Koschei by just two ship's months."

"Then?"

"I thought to wait it out, to use what time was left to me. My taped library was adequate—but even in the face of death, I grew bored.

"After all, I had seen the stars before. Ahead they were blue-white and thickly clustered. To the side they were orange and red and somewhat sparse. Behind was black space, empty but for a handful of dying embers. Doppler shift made my velocity more than obvious. But there was no sense of motion.

"A month and a half of this and I was ready to go back to sleep.

"When the collision alarm went off, I tried to ignore it. My death was already certain. But the noise bothered me, and I went to the control room to shut it off. I saw then that a respectable mass was quickly approaching, aimed dangerously, from behind. It was moving faster than my own ship. I searched among the sparse crimson dots with my scope at top magnification. Presently I found a golden man walking toward me.

"My first thought was that I had gone mad. My second was that my God had come for me. Then, as the intruder grew in the scope screen, I saw that it was not quite human.

"Somehow that made it better. A golden man walking between the stars was impossible. A golden alien was a lesser impossibility. At least I could examine it sanely.

"I found the alien larger than I had thought, much larger than human. It was a biped, definitely humanoid, with two arms and legs and a well-defined head. Its skin glowed all over like molten gold. It was hairless and without scales. Between its legs was nothing but smooth skin. Its feet were strange, without toes, and the knee and elbow joints were bulbous and knobby—"

"Were you really thinking in

big expensive words like that?"

"I really was. I wanted to forget that I was terrified."

"Oh."

"The intruder was nearing fast. Three times I had to lower the magnification. Each time I saw him more clearly. His hands were three-fingered, with a long middle finger and two thumbs. The knees and elbows were too far down the limbs but seemed quite flexible. The eyes—"

"Flexible? You saw them move?"

THE rammer became agitated. He stuttered; he had to stop to gain control of himself. When he spoke again he seemed to force the words through his throat.

"I—decided that the intruder was not actually walking. But as it approached my ship it seemed to be walking on empty space."

"Like a robot?"

"Like a not-quite man. Like a Monk, perhaps, if we could see beneath the garment worn by Monk ambassadors."

"But—"

"Think of a man-sized humanoid." The rammer would not let me interrupt. "Think of him as belonging to a civilization advanced beyond our own. If his civilization had the power, and if he had the power within his civilization, and if he were very egotistical, then perhaps," said the rammer, "perhaps he might com-

mand that a spacecraft be built in his own image.

"That is the way I thought of the intruder in the ten minutes it took him to reach me. I could not believe that a humanoid with smooth, molten gold skin would evolve in vacuum—or that he could walk on emptiness. The humanoid shape is for gravity, for planets.

"Where does engineering become art? Once our ground-bound automobiles looked like spacecraft. Surely an advanced spacecraft might be made to look like a given man and to move like him, yet still have the capabilities of a spacecraft. The man himself would ride inside. If a king or millionaire could cause this to be done—why, then he would stride like a god across the stars."

"I wonder if you don't think of yourself in just that way."

The rammer was astonished. "Me? Nonsense. I am a simple rammer. But I find man-shaped spacecraft easier to believe in than golden giants walking on emptiness."

"More comforting, too."

"Yes." The rammer shuddered. "It came up very fast, so that I had to damp the magnification to keep him in view. His middle finger was two joints longer than ours and the thumbs were of different sizes. His eyes were set freakishly far apart and too low

in the head. They glowed red with their own light. His mouth was a wide, lipless, horizontal line.

"Not once did I think to avoid the intruder. We could not have reached a collision course by accident. I assumed that he had altered course to follow me and would alter course again to protect us.

"He was on me before I knew it. I had flipped the magnification down another notch and when I looked the setting was at zero. I looked up at the sparse red stars and found a golden dot as it exploded into a golden man.

"I blinked, of course. When my eyes opened he was reaching for me."

"For you?"

The rammer nodded convulsively.

"For the pod of my ship. He was much larger than the pod, or rather, his ship was."

"You still thought it was a ship?"

I would not have asked—but he kept changing the pronoun.

"I was looking for windows in the forehead and the chest. I did not find them. He moved like a very large man."

"I hate to suggest it," I said, "not knowing your religion. Could there be gods?"

"Nonsense."

"How about superior beings? If we've evolved beyond the chimpanzees, couldn't—"

"No. Absolutely not," said the rammer. "You don't understand modern xenogeny. Do you not know that we and the Monks and the Smithpeople are all of equal intelligence? The Smithpeople are not remotely humanoid in shape, yet it makes no difference. Evolution stops when a species begins to use tools."

"I've heard that argument. But—"

"When a species begins to use tools—environment no longer shapes that species. The species shapes its environment to suit itself. Beyond this the species does not develop. It even begins to take care of its feeble-minded and its genetically deficient.

"No, he could have better tools than mine, this intruder, but he could not be my intellectual superior. He was certainly nothing to worship."

"You seem awfully sure of that," I snapped.

INSTANTLY I regretted saying so. The rammer shivered and wrapped his arms around his chest. The gesture was ludicrous and pitiful at the same time, for his arms swept up an armful of folded skin and hugged it to him.

"I needed to be sure. The intruder had taken my main pod in his hand and pulled me toward—toward his ship.

"I was glad of my crash straps. Without them I'd have bounced

about like a pea in a dryer. As it was, I blacked out for an instant. When I opened my eyes I faced a great red iris with a black pupil.

"He looked me over with care. I—forced myself to look back. He had no ears, no chin. A bony ridge divided his face where a nose might have been, but there were no nostrils. He pulled back for a better view of the main pod. This time I was not jolted. He must have realized that the jolting could hurt me and had done something to prevent it. Perhaps he had made his ship inertialess.

"I saw him lift his eyes momentarily to see over my pod.

"You must remember that I was facing back along my own wake, back toward Horvendile—to where most of the stars had been red-shifted to black." The rammer was picking his words with increasing care and patience. They came so slowly that I wanted to squirm. "I was not looking at the stars. But—suddenly there were a million clustered stars, and they were all white and bright.

"I did not understand. I put side and forward views on the screen. The stars looked the same in all directions. Still I did not understand.

"Then I turned back to the intruder. He was walking away across the sky.

"You must understand that, as he walked, he receded at much faster than walking speed. Accelerating. In a few seconds he was invisible. I looked for signs of an exhaust but saw none.

"Then I understood." The rammer lifted his head. "Where is the boy?"

The rammer looked about him, his blue eyes searching. Children and adults looked back curiously for he was a weird sight.

He said, "I do not see the boy. Could he have left?"

"Oh, that boy. Sure, why not?"

"There is something I must see."

The rammer eased his weight forward onto his bare and battered feet. I followed him as he crossed the gravel path, followed him onto the grass. And the rammer resumed his tale.

"The intruder had examined me and my ship with care. He had made himself and my ship inertialess or otherwise cushioned us against acceleration. Then he had canceled our velocity relative to Koschei."

"But that wasn't enough," I objected. "You'd still die."

The rammer nodded.

"Still, at first I was glad to see him go. He was terrifying. And his last mistake was almost a relief. It proved that he was—human is not the word I want. But he could make mistakes."

"Mortal," I said. "He was mortal."

"I do not understand. But never mind. Think of the power of him. In a year and a half, at point six gravities, I had accelerated to a velocity which the intruder canceled in no more than a second. I preferred death to his dreadful company. At first.

"Then I became afraid. It seemed unjust. He had found me halfway between stars, stranded, waiting to die. He had half-saved me—and then left me to die, no better off than before!

"I searched for him with the scope. Perhaps I could signal him if I knew where to aim my com laser. But I could not find him.

"Then I became angry. I—" The rammer swallowed. "I screamed insults after him. I blasphemed in seven different religions. The more distant he was the less I feared him. I was reaching my stride when—when he returned.

"His face was outside my main window. His red eyes looked into mine. His strange hand was reaching for my main pod. My collision alarm was just beginning to sound—his return had been so sudden. I screamed out—I screamed—" He stopped.

"What did you scream?"

"Prayers. I begged for forgiveness."

"Oh."

"He took my ship in his hand.

I saw the stars explode before me."

THE rammer and I had reached the shade of a dark oak, one so old and so spread out that its lower limbs needed the support of iron pipes. A family picnicking beneath the tree watched our approach.

"Explode?"

"That lacks accuracy," the rammer apologized. "What happened was this—the stars became very much brighter, at the same time converging toward a point. They flared horribly. I was blinded. The intruder must have shifted me to within a meter-per-second of lightspeed.

"I rubbed my hand hard across my eyes. My eyes remained closed. I felt acceleration. It remained constant while I waited for my eyes to recover. Through experience I was able to estimate its force at ten meters per second squared."

"But that's—"

"One gravity. When I could see again I found myself on a yellow plain beneath a glaring blue sky. My pod was red hot and was already sagging round me."

"Where did he put you?"

"On Earth, in a refertilized part of North Africa. My pod was never built for such things. If Earth's gravity collapsed it, then reentry should have torn it to pieces. But the intruder must have

taken care of that, too, I guess.”

I AM a peopewatcher, an expert. I can crawl into a man's mind without letting him know I existed. I never lose at poker. And I knew the rammer was not lying.

We stood beside the dark oak. The lowermost limb grew almost parallel to the ground and was supported by three iron pipes. Long as were the rammer's arms, he could not have wrapped them around that limb. Its bark was rough, gray, powdery and smelled of dust. The top of it was level with the rammer's chin.

“You're a very lucky man,” I said.

“No doubt. What is that?”

Black and furry, an inch and a half long—one end wiggling in blind curiosity as it moved along the bark.

“A caterpillar. You know, there's no computing the odds you ran against being alive now. You don't seem very cheerful about it.”

“I was—but think about it,” said the rammer. “Think what the intruder must have reasoned out to do what he did.

“He looked through the main window to examine me as well as he could. I was tied to a chair by crash straps and his sensors had to see through thick impact quartz designed for transparency in the other direction. He could see me but only from the front.

He could examine the ship. But it was damaged and he had to guess to what extent.

“First he must have reasoned that I could not slow my ship without the ramscoop web. But he must also have deduced the presence of reserve fuel to decelerate me to zero speed from the lowest speed at which my ramscoop can operate. It was apparent that I must have it. Thus he stopped me dead—or nearly so—and left me to go home the slow way, using only my reserve fuel.

“After he had left me he must have realized that I would be dead of age before I ended such a trip. Imagine how thorough his examination of me must have been. So he came back for me.

“By projecting my line of flight he must have known where I was going. But could I live there with a damaged ship? He did not know.

“And so he looked me over more carefully, deduced the star and planet where I must have evolved—and he put me there.”

“That's pretty far-fetched,” I said.

“Yes. The solar system was twelve light years distant—yet he reached it in an instant. But that is not the point.” The rammer let his voice trail off. He seemed oddly fascinated by the black caterpillar, which was now defying gravity as it explored a vertical wall of bark. “He placed me not

only on Earth but in North Africa. He deduced not only my planet of origin but the region where I had evolved.

"I stayed in my pod for two hours before I was found. Your United Nations police took a record of my mind but they do not believe what they found. A ramship pod cannot be towed to Earth without radar's finding it. Further, my ramscoop web is all over the desert. Even the hydrogen balloons survived the reentry. They think that it must be a hoax, that I was brainwashed as part of that hoax."

"And you? What do you think?"

Again the rammer's face tightened into jigsaw-puzzle lines.

"I had convinced myself that the intruder was no more than another spacecraft pilot—a passerby who stopped to help, as some persons will stop to help if your car battery fails far from a city. His power might be greater than mine. He might be wealthier, even within the context of his own culture. We were of different species. Yet he had stopped to help a member of the great brotherhood, for we were both spacemen."

"Because your modern xenogeny says he couldn't have been your superior."

He didn't answer.

"I can pick a few holes in that theory."

"Can you?"

I ignored his disinterest. "You claim that evolution stops when a species starts building tools. But suppose two tool-users evolved on the same world? Then evolution might go on until one race was dead. We might have had real problems if the dolphins had had hands."

"It may be." He was still watching the caterpillar—an inch and a half of black fur exploring the dark bark. My ear brushed the bark as I faced him.

"Then again, not all human beings are alike. There are Einsteins and there are morons. Your passerby might have been of a race that varies more. Make him a super-Einstein—"

"I had not thought of that. I had assumed that his deductions were made with the aid of a computer. At first."

"Then, a species could evolve itself. If they once started fiddling with their genes they might not stop until their children were mile-high giants with a space drive stuck up their spines. What the hell is so interesting about that caterpillar?"

"You did not see what the boy did?"

"Boy? Oh. No, I didn't."

"There was a—caterpillar moving along the gravel walk. People passed. None looked down. The boy came. He stooped to watch."

"Oh?"

"Presently the boy picked up the caterpillar, looked about him, then came here and put the caterpillar safely on the limb."

"And you fainted."

"I should not have been so affected by what, after all, is no more than a comparison. I would have cracked my skull had you not caught me."

"A poor return for the golden one, if you had."

The rammer did not smile.

"Tell me—if an adult had seen the caterpillar, instead of a boy—"

"Probably he'd have stepped on it."

"Yes, I thought so." The rammer put his tongue in his cheek, which stretched incredibly. "He is nearly upside down. I hope he will not fall off."

"He won't."

"You think he's safe?"

"Sure. Don't worry about him."

FORECAST

JAKOBSSON...

...did not want to miss out on anything just because he was hearing not seeing. So when Dannie Plachta's STELLA materialized before him and impinged itself on his mind-pattern he got on the hook with Dannie and said, "I dig the music—now let's have the libretto." Dannie hung up for two hours of contemplation, came back and said, "Well, it's like this—" Turned out the key words in the story were Last Star and, unlike lesser writers, Dannie meant them. So the story's about the longest look anybody ever took on a clear night. Just this side of forever. Read it in next month's GALAXY.

TOMORROW CUM LAUDE...

...Hayden Howard's novelette about tomorrow's silent, deadly college campus combat alignment (USC Trojans after a future declaration of National Emergency, to be exact) leads off October's glittering array of science fiction's best. Others include—

DAMON KNIGHT's...

...dissonant chord, pitting Damon against all creatures living on all worlds in TRULY HUMAN.

ALSO: CHANDLER ● SCHUTZ ● WILICK ● TAVES ● SHAW

● HERBERT ● BUDRYS ● LEY ● DEL REY



How long since you examined the powers that rule you—and faced your own naked truths?

JOHN FORTEY

TWO MEN walk slowly down the street. It is evening. A slight wind blows dust and dead leaves past them, plays with their hair.

They walk in silence, unhurried, even hesitant. The younger, a dark-eyed man with pronounced, Slavic cheekbones continually

brushes his hair from his eyes. The wind as easily returns it.

They halt at the corner, sheltered for a moment from the breeze. The older man produces cigarettes and each takes one. Their destination is the building opposite, a gray construction of old, stained concrete, crumbling at the edges. The older man studies the face of his dark-eyed companion in the flare of the match. He looks for signs of nervousness, of fear, finds none. Both men inhale, blow clouds of gray smoke into the gray night air. They smoke in silence for a few minutes. Finally the younger man smiles resignedly and glances at his wristwatch.

"Time for me to go, Ivan."

The other sighs deeply. Few words are left unsaid—they have discussed everything.

"I wish you luck, Stefan."

They clasp hands firmly. Stefan turns, crosses the street and enters the building.

A third man approaches, dressed in flowing robes of black, his head hooded. Walking swiftly, black robes flapping, he follows Stefan through the doorway, glancing once in Ivan's direction.

Ivan involuntarily steps back into deeper shadow, feeling his breath speed up, his heart thump a little louder, faster. Under the man's dark cowl, revealed for a second by that one swift glance, he has caught a glint of silver.

The notice above the doorway reads: EVENING CLASSES.

ON SALISBURY Plain, five miles from Stonehenge, stands the Citadel of the Brotherhood. It is a structure of shimmering metal, two miles in height, a full half mile across at the base. It tapers, in a logarithmic curve, to a point. At various heights are balconies open to the air—but those more than two thousand feet from the surface enclosed with a transparent substance. The main structure is formed of a titanium-steel alloy. No joints or welds are discernible. The structure appears to have been cast or carved from a mass greater than it.

Pulse modulated signals of various wavelengths have been intercepted emanating from the Citadel on several occasions. One such signal, wavelength 27.48 Mc/s, was immediately identified as television but faded before a coherent picture could be obtained. Other electrical phenomena have been observed in the vicinity, most notably jamming of all radio reception up to a range of three miles and a form of St. Elmo's Fire persisting for several hours.

It would seem almost impossible to believe that such a structure could be erected without arousing the curiosity of the local populace, yet such appears to be the case. Bondsmen, when questioned in its very shadow, knew nothing of it

and admitted to no interest at all.

The Citadel was raised in April, 1987. It was completed in two days. No details as to the structural methods used have been obtained.

THE thirty-fourth meeting of the Society of the Spider took place in a Berlin cellar. Berlin, city of spies for almost fifty years, now held the last spies on earth. The cellar stank of dust and old wine. Broken glass crunched underfoot and mice scuttled in the shadows. Sixteen of the members had met here regularly for over two years, discussing, planning, arguing. These men sat comfortably, in silence.

Of the remaining two, one was a new member. The hypnotic brand of his initiation still smarted in his subconscious. He sat forward in his seat, staring at the dimly lit faces around him, jumping at every unexpected sound. The other was the founder of the society, Ivan Petrov. Absent from meetings for a month, he had returned, bringing with him the new member, Stefan Alderton.

Petrov spoke.

"Gentlemen. All of us here—with the exception of Stefan—are familiar with the Brotherhood artifacts. We have discussed them often and suggested possible uses or reasons for their existence. Stefan, on the other hand, had not heard of them

until four days ago. He is a native of Kazakhstan, where the Brotherhood is still largely unheard of. He came west in search of his brother. His experiences of the Brotherhood, although brief, are, however, more intimate than anyone else here can claim."

He paused, glancing at Alderton.

Alderton supplied: "I found my brother. He is now a Priest of this Brotherhood."

Petrov continued above a murmur of sympathy: "His lack of knowledge underlines the deplorable breakdown of communications over the past ten years. I shall, therefore, give a brief history of the Brotherhood's rise to power to clarify matters and mainly for Stefan's benefit. The artifacts themselves, we shall discuss later.

"The Brotherhood first made its appearance in central Europe, circa nineteen eighty-three. It spread swiftly, mainly via further education classes for adults, by offering courses based on tachistoscopic film and hypnosis, designed to teach a foreign language in days or quantum physics in a few hours. It is believed that these courses also prepared the student for the next step—full initiation into the Brotherhood. We know very little about the details. Much of our data is obtained by questioning

pupils before they become too uncooperative. After several such courses most students retreat into a world of their own. Priests can be immediately recognized by their black robes and, more certainly, by the metal band each wears, apparently inset, around the upper part of the head. Further, individual Priests appear to have no separate self-awareness. Each forms a part of a group consciousness.

"In five years the Brotherhood won complete control of Europe, most of Asia and North America. The next five years sufficed for them to take command of the whole planet. As a result, civilization as we knew it has virtually ceased to exist. We are plunged again into the Dark Ages, with the Brotherhood playing the roles of both the nobility and the Church. We, the remaining eighty per cent of the population, are cast as serfs and denied education—unless we wish to submit to the teachings of the Priests, which inevitably culminate in Brotherhood membership.

"This situation is the reason for the existence of this society. Our purpose is to alter it."

Petrov paused again. He stared for a long moment at Alderton. When he again spoke his voice held a soft note of hope, in sharp contrast to his previous harsh tones.

"We are all old men here, Ste-

fan. Look around you—not one of us is below the age of sixty. We need a young man who hates the Brotherhood as we do. Most young people accept the present situation—or perhaps prefer it to the Cold War. They prefer a peaceful pastoral existence to the threat of nuclear annihilation. But you have lost a brother. You know this is not the way of progress, that we in a cultural backwater. We need a man who will agree to enter the Brotherhood for us and fight for us from within.

"You are our choice, Stefan."

FEED a dog.

Feed it regularly for six months, ringing a bell while it feeds. At the end of the six months the bell alone, without food, is enough stimulus to bring saliva to the mouth of the dog. A similar effect can be obtained with pain—resulting in the phenomenon of a dog's salivating when it is pricked with a pin.

The dog has acquired a conditioned reflex.

Or take a television audience of several thousand, all mindlessly watching soap opera. Interrupt the play for advertisements—and most of your audience will treat it as a chance to make coffee, visit the toilet or possibly even speak. The few who continue watching have probably been mesmerized.

Now, without interrupting the

play, substitute for a single frame the word THIRST in capital letters. If the frame-speed is fast enough no one in your audience will be able to read it. It will not be on the screen long enough to register consciously. Do this three more times at intervals of twenty seconds. The fifth time, flash BEER at them.

Your audience will rush to the nearest public house as one.

This is subliminal conditioning.

These and other similarly half-understood methods were used on Stefan Alderton. The Spider took his mind and molded it. His subconscious was made a minefield of hidden reflexes, each designed to break through any later conditioning. He endured hours of seemingly innocuous scenic film while subliminal techniques sprayed him with new concepts. His dreams were not his own. Each night a muted speaker under his pillow whispered to his mind, which was unhindered now by coherent thought.

Only his mornings were free. Most of them were spent with Petrov—walking, talking. He told over and over again the story of his brother's eagerness to travel West, to go to the great schools now being opened, to learn as much as possible of the world around him.

And of their last meeting.

Each time he told the story it was as if he lived that moment

again, stood again in the small room with its odor of books and chalk dust, felt again the heat from the single shaft of sunlight that fell directly onto his face—and saw again the blank, unrecognizing stare of his brother. That unseeing stare could be found on the face of any and every Priest. Stefan painfully recalled looking around the room, nothing that although there were five other Priests in the room, not one of them bothered to look directly at him.

There had been no need for them to look at him—they had been able to see him through the eyes of his brother.

His sudden shocked realization of this fact had made him want to vomit. He had run from the room, forgetting his coat in his haste.

Ivan had found him two days later, drunk, money all gone, wanting only revenge. Ivan had dragged his story from him many times, knowing that his hatred would burn the fiercer if constantly stoked—and would help Stefan persevere in his quest for vengeance.

The lessons continued for six weeks.

Satisfied at last, Stefan's tutors released him. He and Petrov traveled to England, where he enrolled in the Brotherhood-controlled night school nearest to the Citadel.

Six months passed. During it no contact was attempted by Spider. Alderton was watched from a distance but not very carefully.

Until he was reported wearing black robes and a metal ring in his skull.

THE Western Desert of Australia sports the second Brotherhood artifact. Known as the Pattern, this structure consists of rods of a pink substance (presumed plastic but to date no sample has been available for analysis) of various widths laid out in a complicated design and covering roughly two hundred and fifty square miles. The rods vary in length, the longest being up to thirty feet, the shortest less than an inch.

Although Priests can be seen walking freely through the Pattern, no other animal life can exist closer than about five hundred yards. Even at this distance severe headaches and involuntary twitchings of the limbs is usual in humans. Birds and other wildlife avoid this area but tests with guinea pigs and rats show them suffering acutely at a distance and dying if placed closer than five hundred yards. It is not known if these symptoms are a result of the Pattern or some form of protection designed to keep unwanted visitors away from the area.

Photographs taken from high-altitude drones show the Pattern to be roughly hexagonal in shape and resembling a gigantic snowflake.

As with the Citadel, no function has been postulated for this structure.

THE BODY of Stefan Alderton walked slowly towards the great door set in the steel wall that towered above the clouds. Six months of evening classes had taken his mind. He wore a metal ring in his skull.

Two members of Spider crouched in a parked car a quarter of a mile away, watching a radar screen. The thin beam of electrons traced its green path across the screen, peaked in the center, and flicked back to the beginning two thousand times each second. The peak, first, told that the X-band transmitter hidden in Stefan Alderton's left forearm was still functioning and second, it gave a direction.

Another car parked two miles east, bonnet in the air and a mechanic frantically doing nothing, gave a second direction. A third car, containing at first glance a courting couple, gave a third.

All three tracking stations lost Stefan as he entered the steel shell of the Citadel.

Sensing fulfillment, Spider assembled in the village which lay

practically at the foot of the metal spire. Its patience was rewarded at the end of the third day of waiting. Once more a peak formed on the flickering green trace.

The cage of the Citadel had released its willing prisoner.

THE function of the third artifact is known. Unfortunately its location is not. It was built in France and is an enormous ceramic ball of almost three kilometers diameter. On March 5, 1986, at 10.05 hours local time, it rose from the ground and headed rapidly due north, gaining altitude as it proceeded. No rockets or other motors were observed but the area from which it was launched was later found to be radioactive, although not dangerously so. It was last seen three days later—by sheer accident—some twenty Astronomical Units away by an astronomer, Mr. G. Kerry, who was carrying out routine photography of the Orion constellation. This area of the sky is of especial interest as several pulsars have been recently located here which are believed to correspond with known, visible stars.

The only starship successfully launched by mankind, the sphere has been seen by some five hundred men. Its existence is known to perhaps four times that number—excluding, of course, Priests.

Further details of its trajectory will be available when the Kerry

photographs have been examined.

TWO men huddle under a laurel hedge at the very base of the Citadel. They whisper—partly in awe, partly from fear of being detected, although no one else is in sight.

“He’s on that ledge—about seven hundred feet up.”

“I see it.” Petrov stares up until his whole back aches. “How long has he been there?”

“Four hours. From back there—” he gestures to a line of trees a mile distant—“you can just make him out with binoculars. He just stands there. He hasn’t moved all this time.”

“A nightwatchman, perhaps? Sentry?”

“We’re dealing with one mind, Petrov, not a group.” He smiles with pleasure at being able to repeat back to Petrov what the leader himself has said until it is almost a motto. “He watches the night but he isn’t a man. Not as we use the term.”

Their whispering ceases as the sound of footsteps becomes audible. A Priest appears, walks slowly past without pausing or glancing either way. Starlight glints on his shining headband, making it glow. The even tread fades and the two men straighten.

“We’ll have to try to reach him,” Petrov decides.

“What? Up seven hundred feet of polished steel?”

"No, I mean reach him mentally. He'll come to us if we can do that."

"We'll lose him altogether if he breaks contact with the rest of the Brotherhood," objects the other.

Petrov ignores him, sucking his bottom lip thoughtfully.

"We'll use the flares."

"But we can't risk it now."

Petrov stares him down.

"Go back. Tell them. The flares."

The other hesitates, makes to argue further, then turns and crawls through the hedge. In a few moments Petrov is left alone with the night and the Citadel towering above him. The top is invisible but he can just see the ledge on which Alderton stands, silhouetted against the low cloud.

Twenty minutes pass. Then, over by the line of trees, five very lights flicker a colored pattern across the sky.

The pattern mirrors one already in the strange mind of Stefan Alderton.

The watchers in the trees see the figure on the high balcony stagger, jerk arms and legs like a marionette—and fall.

Seven hundred feet. Men have fallen from aircraft at much greater heights and lived, their falls broken by trees, snowdrifts.

There are no trees below Stefan Alderton and certainly no snow. But the walls of the Citadel curve

outward. He falls two hundred feet before they curve sufficiently for him to make contact. He bounces outward slightly, once, and then maintains contact for the rest of his fall. His left leg flails against the wall and smashes beyond any hope of repair. The steel ring set into the bone of his skull scrapes the shining wall for fifty feet, sending up a shower of brilliant sparks and making the whole Citadel resonate.

The curve of the wall increases sharply at the base. Friction piles on friction as Stefan plunges down. The skin is torn from his body. A wet smear is drawn down the wall parallel to the glittering streak which makes the contact of his headband.

The last fifty feet, mercifully, he begins to roll, and is spun away from the tower, to come to rest mere yards from the waiting Ivan.

The Citadel hums like a gigantic tuning fork in the sudden quiet.

Footsteps. Shouts. Ivan runs to the body.

"Stefan—"

"Ivan—"

The eyes open once and close again. The whole incredibly living body shudders. The whispered greeting is barely audible.

Ivan forces himself to disregard the terrible injuries, the face partly torn away and covered with blood.

"Stefan. The Citadel. The Pattern. What are they for, Stefan?"

Stefan shudders again. For a moment Ivan thinks Stefan is still one with the group mind—members of which must surely even now be racing to the laurel hedge. But no—Stefan had spoken. Ivan lowers his head to Stefan's.

"We were right, Ivan," whispers Stefan. "The Priests are one. One mind. But oh, how we underestimated that mind—how we misunderstood it! It is the mind of a child, undeveloped. And yet it—they—make us look like apes."

"The artifacts, Stefan, what are they?"

"They are a thousand years ahead of us," the whisper continues, oblivious to the question, "yet they are but children—a child—"

Running footsteps approach.

"Quickly, Stefan, the Pattern—"

The dying man's eyes open for the last time. His voice grows stronger as he speaks.

"The Citadel? The Pattern? And the Starship?"

He smiles thinly through the blood.

"Toys, Ivan, toys." ●

★ ★ GALAXY'S STARS ★ ★

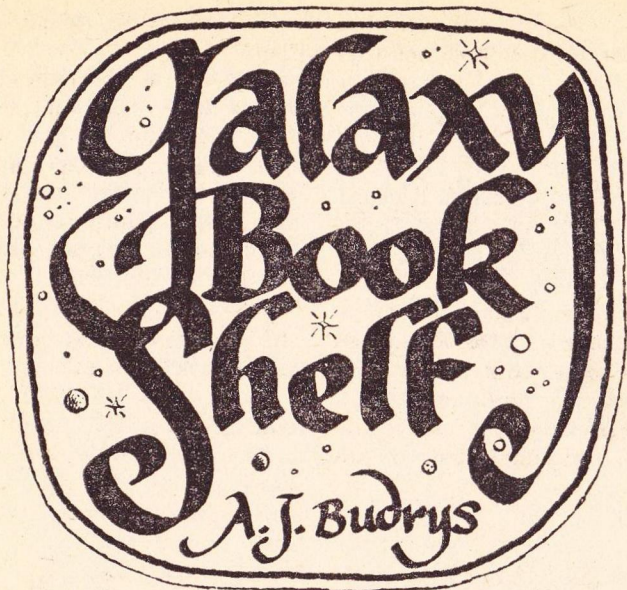
Accompanied by his whimsical Martians and Venusians, Dr. Donald H. Menzel returns to our pages after an absence of four years. One of the world's leading astronomers, as chairman of the International Astronomical Union's four-man *Working Group on Lunar Nomenclature*, he spent part of July in Moscow selecting the names for the craters and other natural features on the far side of the moon, which has just recently been mapped. The names that Dr. Menzel and his three colleagues have chosen will become official when voted on by the 2,000-member body of the I.A.U. in 1970.

Dr. Menzel is also an expert in the fields of mathematical physics and special branches of radio communication. He has contributed technical articles to professional journals in numerous fields and has written numerous books, including *A Field Guide to the Sun and Planets* and

The World of Flying Saucers: Dr. Menzel also wrote science fiction—some for *GALAXY* under his own name, and some under the pseudonym Don Howard when he was in college. He even served a stint as science editor for Hugo Gernsback's sf magazine.

Dr. Menzel has been an art enthusiast since his boyhood days in Colorado and he is currently a member of the Cambridge, Massachusetts, Art Association. Though he has been seriously interested in painting his technicolor extraterrestrials only since 1960, they have been on exhibit to enthusiastic audiences in various parts of the world.

Is there life on Mars? Or are these Martians only pigments of Dr. Menzel's colorful imagination? Our astronomer-artist will soon be back in *Galaxy*, at which time we shall ask him.



I READ the news today. James Earl Ray will be in court to appeal his confession. Sirhan Sirhan is getting settled in his cell on Death Row. Apollo 10 is about to re-enter after successful completion of the penultimate Lunar mission. There is no trace of the ground crew sergeant who took the Hercules out over the Atlantic and asked for one phone call to his wife. And got it.

And that's some of the news of the world of the future.

If you obtain a copy of *All Our Yesterdays*, by Harry Warner, Jr., (As you should. From Advent: Publishers, Inc., P.O. Box 9228, Chicago, Ill. 60690. \$7.50) and read its account of the doings and thinkings of science fiction people in the 1940s, you will get more than one normally bargains for in a

book like this. You will get the incunabula—the photos of F. Towner Laney; the personality analysis of Walt Dunkelberger; the index that revealed to my astonished eyes that I'd been observed helping to sing a Richard S. Shaver lampoon at the 1947 Philcon. But you will also, I think, get more than an inkling of how and why it is that some of us have to claim a "new thing" today. For what we mean by the "new thing" is a portmanteau into which we stuff all the aspects of the future we simply did not see coming.

Long one of the most respected recorders of events within the microcosm of sf fans, Harry Warner has produced here, first of all, that calm, reasoned and, I suppose sometimes slightly prejudiced, "fan history" that the microcosm needs as a counterweight to Sam Moskowitz's earlier *The Immortal Storm*. *All Our Yesterdays* concentrates on the 1940s. Brief essays first establish the prior state of science fiction and science-fiction fandom, so as to provide a perspective in which to view the more closely detailed events. Subsequent volumes are promised on the later decades. Warner several times refers to Moskowitz and chides his book for being far too concerned with the pocket struggles of New York fandom, and therefore for being a significant distortion

of the lore of the fannish universe. (This seems a valid point, although it is also true that the movers and shakers of the New York bush wars are generally still significant activists in both professional and amateur science fiction, whereas most of the other major fannish events of the 1940s are sunk without trace).

But some of you may be wondering, even more than usual, just what the hell I'm talking about.

Well, there is a thing called fandom. It is the result of the recorded thoughts, and the increasingly recorded deeds, of folk who at some time in their lives were moved not only to read science fiction but to live in it. These people were impelled to contact other sf readers and to form associations with them on the basis of either a mutual interest in science fiction or of some even stronger mutual interest discovered as a result of the preliminary sf contact. Articulate, given to bursts of hyperactivity, often consumed by a loneliness demanding Brobdingnabian spasms of communication they have from their number contributed the major portion of today's science-fiction editors, writers, artists. The derivative formatists have in turn perpetuated science fiction as we know it today and as it continues to raise fresh generations of fans. And these fans, in turn, will some day... But before we elaborate

on that conclusion, you should know that it might well be of considerable interest to you to read *All Our Yesterdays*, even if you don't recognize anything more than the names of the people who have since become familiar professionals. (Or well-known scientists, for that matter. You will find *their* names here in the form "Young — published two issues of a mimeographed magazine in 1943, but nothing more was ever heard of him.")

For even if you don't recognize any of the names, it is nevertheless true that no other entertainment literature to my knowledge has ever raised up a satellite structure of such complexity that it can—and often does—exist independent of the First Cause, nor has any other literary genre generated such a systematized frame of reference in which entire communities of outwardly ordinary individuals can share the same dramatic interior life.

IN FACT, the only thing I have seen analogous to fandom is society itself. No other institution is comparable in its dedicated pursuit of the proper attitude, the apt message, the most effective plan and the noblest future. (Modified, of course, by a sobering realization that out there, somewhere, regrettably squats that great stultifier, Practicality.) All

of us, each in his own words and each in his own way, would like to try to do something, however small, that would improve Man's grasp and understanding.

Of what? Well, of the extension of the past. I think that we in the 1940s, pursuing this common human trait of simplifying the past and calling it the future, believed even more than we realized that the more efficient machines would lead to better men and that the larger cities would lead to reasonable folk. Oh, some doubted it. But not me.

This is what is to be found in Harry Warner's book even if you never heard of and don't care about gafia, crifanac or Morojo. It is indeed a history, as distinguished from a polemic. The specific names and things it cites are reflections of real events and genuine feelings. And there is sense to be made of it even if your interest is wholly independent of the particular labels this constellation of realities happens to have donned for the occasion. Warner's opinions are evident but unobtrusive; it is possible to discern that this microcosm, like our larger one, is mostly made up of good folk with strong personal opinions, is mostly motivated toward improvement, certainly less creative than it thinks but nevertheless aware of creativity's importance. This

book, like fandom, is a good thing.

But as I said up there in the beginning, even a good thing can miss a point. And this, too, is not surprising since we do have only the past for a hint of what the world of the future will bring.

I would like to illustrate my point. I think perhaps I can. Here is a column I wrote in April, 1968, after returning home from a business trip. But then I remembered that my job is to review science-fiction books, not science fiction. So I put it aside:

From the air Washington, D.C., looked dusty in the late afternoon. In the main terminal at National Airport, ticket clerks had been suggesting there might be seats on flights from Friendship Airport. They had no suggestion as to how long it might take the regular limousine service to get through downtown Washington to Friendship, which is near Baltimore. But there were certainly no seats to Chicago, Milwaukee or St. Louis at National. So I took the shuttle to New York and that was how I saw the burning like a barricade across the city at 14th Street. The flames were Da-Glo orange.

My plan was to take a Chicago plane from LaGuardia. I settled for a cab ride to Kennedy and the last seat on a flight home via Cincinnati.

The nation's capital, as I was saying, had been burning. From National, with its panoramic windows, the historical monuments along the Potomac had stood out clearly against the ropy smoke. We had gotten to National, usually a twelve-minute cab ride down Connecticut Avenue for the Shoreham, via Georgetown and the Key Bridge. Whether you know D.C. or not, what this means is that for five tired businessmen who had been strangers until they struck their bargain with the cabbie, the Insurrection up to this point had been an hour's traffic jam.

The flight path from Kennedy to Cincinnati crosses Baltimore. D.C. is off the left wing. Doubling back as I was, at something like 10:00 P.M. local time, now, I was sitting in a First Class left window seat with a double whiskey sour in my hand, partaking of a little Mozart through the headphones of my Astrostereo.

Washington from the air at night is one of the world's great visions. When I see it, I think of the superdense cities traced out far below our England in the Arthur C. Clarke story. It is like looking at a scanner display and making out the lovely, obviously intelligent webworks of an aesthetically conscious, persistent and prosperous alien people. At this time, it had rust-colored, very dark streaks across it.

In Cincinnati the bouncy stewardess with the Texas accent received a message that flight crews would not be permitted to leave O'Hare Field for their homes in Chicago but would have to bunk out at the field after the flight terminated. She asked me what Washington had been like. I couldn't think of how to put it.

"Like World War III," I said and she nodded happily, comprehending.

But later, when we swung in over the West Side of Chicago at midnight, she ran up and down the aisle, pointing out and crying: "Look it thet! Look it thet, my Gawd!"

Well, I got home all right, to suburban Evanston, in a cab driven by a man who blamed the whole thing on the Mayor of Philadelphia for taking away his policemen's shotguns. I also learned that he lived in all innocence on the 3000 block of West Madison and I was his last fare before he checked in and went home. I'm not really a jerk but I didn't like the way he talked, so I just wished him pleasant dreams.

The next day, I checked with the local police for reassurance, and then my wife, my four sons and I got on our six bicycles and went up to the Baskin-Robbins store on the corner of Dempster and Chicago. The

youngest is six and I'd promised him he could have a ride to the ice cream store when I got back home from the annual convention of Pickle Packers, International, a very nice bunch of people I no longer work for.

As I recall, everybody had a double dip but David, the youngest. Despite his twelve-block accomplishment, he settled for one dip. The next day being Sunday, we dressed up neatly and took the bus to Raymond Park for the memorial service.

WHAT all this has to do with science fiction (I wrote in April, 1968) is so obvious that its full implications still escape me. It was not at all like World War III. World War III in the movies is accompanied by sirens, crashing sounds and the crackle of flames. But the common element in all my insulated glimpses from real life was the absence of sound effects. In all the afternoon and evening, I heard one klaxon—on an empty ambulance headed for the Key Bridge away from D.C., probably toward a road accident on the chock-full highway to Dulles airport. Other than that, it was cab motors, turboprop and jet engines, arrival and departure announcements, coins dropping into telephones, ten pennies in a slot for a copy of the Chicago *Sun-Times*. That, and politeness; the very quiet,

resigned AP wirephoto editor in Washington on Friday morning, when the headline was still D.C. QUIETS DOWN. He said he was glad to see me again, hoped I'd be back next year, but didn't really think he'd be able to do much with my 8 X 10 glossy of a pretty girl unveiling a sculpture of a six-foot eagle clutching a 2½-foot pickle in its claws. All of us were polite; the taxi man in Washington, the five of us in his cab, even when we were stuck immovably in that narrow Georgetown Street, with people walking rapidly and the hooter getting closer and closer. There was no shoving or shouting at National; the clerks worked quickly and without raising their voices. On the shuttle, a salesman put his knee in my lap while trying to aim his Nikon through the window, and I was very polite to him.

It had to be, of all things, a stewardess out of Steve Canyon who became my only exhibit for panic, and it was two other cab drivers, one in John Lindsay's New York and one in Dick Daley's Chicago, who spoke confidently of locking their doors and "driving right through" crowds if the need ever arose. One thing their television viewing has apparently failed to show them is a car with its four wheels in the air. Or else they've related it to a movie about World War III. At 26,000 feet, with Mozart and whiskey sours,

I gazed with fascinated interest on the subterranean jewelery of Washington at night and thought of Arthur C. Clarke. What difference does it make what you relate to?

What difference? Well, I'm not sure. The difference, if any, must be somewhere in the difference between the flashy and the enduring. So much of what we want is flash. Flash is often more fun. The novel of World War III is not popular by accident. And the mysterious figure with mysterious capabilities, spinning conspiracies or, conversely, righting wrongs with one morally superior stroke—he, too, is an enduring archetype among us because there are enduring needs within us and he meets them. A large part of what is generally called "science fiction" all in one lump, good and bad, flashy and enduring together, is wedded and bedded, part, parcel and calliope with a complex, communicative, communal, commutative, comprehensive social network which fosters and battens on the urgent, immediate need to *make* the future happen.

We want to escape from the incomprehensible here-and-now into a simplified world where an Avenger sets things right with one forceful blow after the "mealy-mouth politicians and fuzzy-minded social 'scientists' have muddled it up." We want to have

the Arcturians come down in search of Marilyn Monroe and knock aside things-as-they-are in the process. We want a new deal for ourselves, by being born again, this time fully conscious, into a world depopulated by the Plague, where all is still and all is ours.

We live in a flash world. The dimensions of things have gotten worked around to where they are larger than life as it was when the harmless entertainments of flash fiction were first created. Any one man with a degree in biochemistry, for instance—one poor, miserable, unsung cataclast with a mere ten years' education, or just an ordinary lot of luck—could make such a Plague. We may all be dying tomorrow for one man's gratification of a wish which should legitimately be sending a hundred thousand of us to the newsstands with seventy-five cents each for the next John Christopher novel.

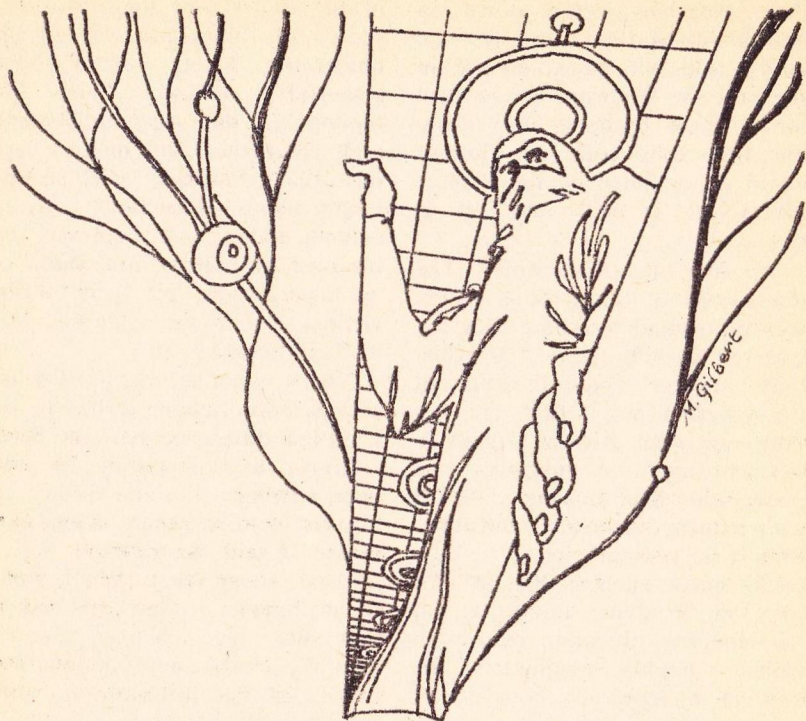
You follow me? So much of science fiction has nothing to do with the intrinsic things of science fiction. It has to do with the intrinsics of less than perfect humanity. It is predicated on the powerlessness of the individual, rather than on the capabilities of the lucky few. The Plague, the Arcturians, or the Avenger, are needed to fill the lack of power in our lives.

Or they were. Here in the world

of the future, our longed-for expertise of things has created innumerable places where once powerful authority has no monopoly on accomplishment, and where there are many weapons that are best wielded by empty hands. If he but be driven enough today, any man can be his own pulp hero, and those of us who want all their thrills vicarious will never again nod safe in their libraries.

That's what it all has to do with science fiction. It has to do with the difference between flash writing and good writing, because good writing is life and flash writing is the other thing. Good art has to do with life realized. We've always known that. What some of us appear to have missed is that life has changed fundamentally, and science fictionally.

That's what it has to do with science fiction. The greater chunk of the old basis is dead as of April 4, 1968. We used to set stories on Mars and in the future not because we understood those places but because we didn't—which made them totally believable places in which to have momentous things happen. Life at home proceeded apace. But we live now in a time in which it not only can happen here—you name it, and it can happen, good, bad and indifferent, provided only it's flashy enough—it not only *can* happen here, it will. ●



REVIVAL MEETING

DANNIE PLACHTA

All Mr. Kraken's assets were frozen—including his heart!

GRAHAM KRAKEN lay upon his deathbed. His eyes wavering upon a dim and faraway ceiling, he savored the reassuring words.

"The odds are all in your favor," the doctor said.

The bed seemed to tense be-

neath Kraken. Springs coiled tautly.

"Some day—" the doctor's voice rang with tiny, metallic chimes— "medical science will have advanced far enough to revive you. Your frozen body will

not deteriorate in the interim." The chimes grew hushed. "Some day science will repair your body and you will live again."

Graham Kraken died easily and they froze his corpse.

HE DREAMED that he was in Miami Beach and opened his eyes. Blinking into the dimness of his room, he found a visitor seated at his bedside.

"Good morning," said the visitor.

The stranger, Kraken noted, was an elderly gentleman with a bald head and a pleasant face.

"Good morning," said Kraken in a friendly manner. "Nice earrings you have there."

"Thank you," said the visitor. "They're antennae."

"Oh?"

"For the transistor radios built into my earlobes."

"Indeed?"

"Stereo."

"How nice," said Kraken. "How do you turn it off?"

"Don't," the visitor responded. "Speak up a bit, please."

"I'm sorry," said Kraken. "I didn't know."

"Nice weather we're having."

"I hadn't really noticed. By the way, have they done anything about that?"

"Well, they did for a short time," the old gentleman said. "But they had to give it up."

"Too many conflicting wishes?"

"I'm afraid so."

"A pity." Kraken glanced at the heavily curtained window. As he watched, the glass behind the curtains suddenly shattered. "Oh?" he said. "Riots?"

"No," replied the visitor. "Supersonic transports."

Another pane of glass automatically slipped into place.

"I guess you get quite a lot of that."

"Easy come, easy go."

"By the way," Graham Kraken asked, "what year is this?"

"Twenty-eighty-eight," he said.

"Well," said Kraken, "it has been a while."

"One year is pretty much like another," said the stranger.

"How about the money?" wondered Kraken. "Did my estate hold out?"

"I'm afraid not," said the visitor. "I had to pay for your revival."

"That was very kind of you," said Kraken. He noticed the sunlight edging the window curtains.

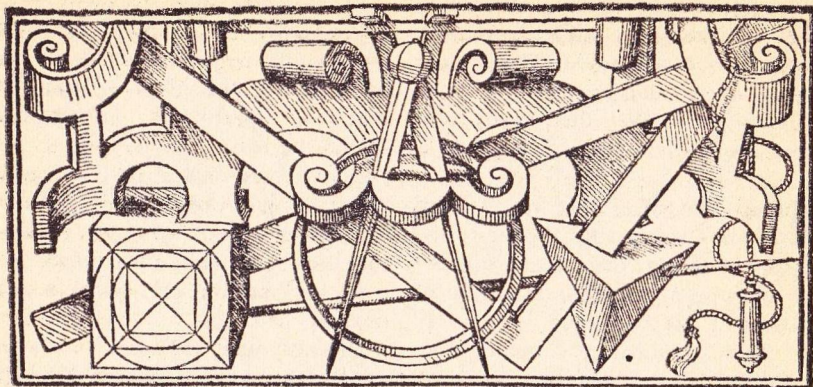
He rose upon an elbow. The motion made him feel faint.

"Please don't try to move," the visitor said. "It's important that you rest for the heart transplant."

"Oh?" Kraken leaned back. "Is there something wrong with my heart?"

The visitor stood up slowly.

"No," he replied, "but there's something wrong with mine."



FOR YOUR INFORMATION

by Willy Ley

THOSE who have the desire—and a reason, plus the necessary cash—to buy a compound that was declared to be impossible, can now do so. The name of the compound is chlorine pentafluoride and its chemical formula, expressed by the name, is ClF_5 . It is a rocket fuel—or rather an oxidizer for a fuel. Well, sort of, since it is not truly an “oxidizer.” But we shall see.

Nobody thought of chlorine pentafluoride specifically in the past, but for the last forty years rocket men have been dreaming about “something like it.” The dream was based on one cold fact—a very cold fact indeed—namely the boiling point of liquid oxygen at *minus* 183

degrees centigrade. Oxygen must be colder than that to stay liquid. This caused certain handling problems and one got to wishing that there were a substitute for liquid oxygen that stayed liquid at ordinary temperatures. Could one use an oxygen-rich substance that was liquid over about the same temperature range as water—or over the temperature range of alcohol—and was also inexpensive? Since this was a dream—why not throw in a low price?

Since any self-respecting person has a chemical handbook or two somewhere on the bookshelf it became customary to devote otherwise unoccupied evenings to looking up oxygen-rich liquid

compounds. For various reasons the molecules of these compounds should also be fairly light. There was no reason to worry about that point, they turned out to be compounds of light elements. The elements in question, with their atomic weights, were:

Hydrogen (H)	1
Nitrogen (N)	14
Oxygen (O)	16

Since we'll have to know the atomic weights of three other elements later on they might be added to the list right here. They are:

Fluorine (F)	19
Sulphur (S)	32
Chlorine (Cl)	35½

The ½ after 35 in the case of chlorine is not a typographical error but a fact of nature that annoyed chemists for at least three-quarters of a century. The explanation is that the atoms of the common garden-variety isotope weigh 35 units each—but another chlorine isotope with a weight of 37 is just common enough to shift the weight of the natural isotope mixture by half a unit.

To return to the theme: the reason for checking on various compounds was to find an oxygen-rich substance that could be substituted for pure oxygen in

a rocket. At that moment I remembered having been told once by my chemistry professor that the names of oxygen and of hydrogen are both wrong and should be reversed. Oxygen means "acid maker" but quite a number of oxygen-free acids exist. Hydrogen means "water maker" but no acid exists that does not contain hydrogen and when it comes to water hydrogen plays a minor role. The formula of water is, of course, H₂O which means that the weight of the molecule is 2 + 16 = 18. It also means that there is quite a high percentage of oxygen in that stuff; by weight the ratio is 8 to 1 in favor of oxygen.

But try to make the hydrogen atoms let go of the oxygen. With ordinary means it cannot be done at all—one reason water was thought to be an element for such a long time—and it can fairly easily be done only when an electric current is available. But beware of memories of classroom demonstrations in which a glass apparatus was filled with water and a little sulphuric acid was added "to make the water conduct the electric current." Of course you could see the hydrogen accumulate at one electrode and the oxygen at the other. Of course you could see that the hydrogen required twice as much space as the oxygen. But the electric current did not take the water apart

directly, even if it looked that way.

What happened is this:

The electric current took the sulphuric acid apart. The formula of the acid is H_2SO_4 and the result was H_2 (free hydrogen) + SO_3 (sulphur trioxide) + O (an oxygen atom). The two gases hydrogen and oxygen had been freed in the ratio of 2 : 1 and SO was left behind. The SO_3 mediatey combined with the surrounding water: $SO_3 + H_2O = H_2SO_4$ so that you had a molecule of sulphuric acid again. And then the whole cycle started all over again, gradually using up the water.

Since the hydrogen atoms would not release the oxygen atom, water could not be used. But compounds with more than one oxygen atom in their makeup might not be so stubborn about it. How about hydrogen peroxide, chemically speaking H_2O_2 . Any chemist who had experience with "willing" to split into H_2O and O. In fact it was too willing, it did so without any visible reason and in so short a time that the process could only be called an explosion.

Miss or Mrs. Reader have no fear, however. The hydrogen peroxide in your bathroom is only "a four per cent aqueous solution" which means that 4 per cent of what is in the bottle is hydrogen peroxide. The other 96 per cent is harmless water. And you could

not get anything stronger than an 8 per cent solution, which is still safe. Explosions happen when the solution is 30 per cent or stronger. Chemists with experience warn everybody away from strong H_2O_2 solutions and it took a lot of research during the second World War to find out why strong H_2O_2 blew up. It happened when the substance touched copper and since piping usually involved brass fittings hydrogen peroxide looked even more unsafe than it is. True, it has been used but nobody likes to work with it.

NOW, the handbook told of two nitrogen compounds that one might consider. They were nitrogen tetroxide (N_2O_4) and nitrogen pentoxide (N_2O_5). For the tetroxide the weight ratio of nitrogen to oxygen in the molecule would be 28 : 64; for the pentoxide the weight ratio would be 28 : 80. Not bad in either case, especially since the nitrogen was not too likely to combine with anything during the combustion process and would, one could hope, simply appear as gaseous nitrogen in the exhaust. But the chemists with experience shook their heads again: unsafe.

By now N_2O_4 is made and is available in tank car lots. Apparently one merely had to learn a technique of handling it. But thirty years ago the bad ex-

periences of some researchers left only one substitute for liquid oxygen that could be used: nitric acid. The formula is HNO_3 so that the atomic weights in the molecule add up: $1 + 14 + 48$. Hence the weight ratio of oxygen to hydrogen-plus-nitrogen was 48 to 15, or a little better than 3 to 1. It would need a more detailed analysis of the combustion process to show whether the nitric acid would relinquish its oxygen easily or not. And after a analysis—on paper—had shown that it would, it would need some experimentation to verify the assumptions made for the calculation.

Of course anybody with even the most rudimentary knowledge of chemistry knows that nitric acid is by no means a peaceful substance. But at least it would not blow up.

And most folks also know by now that quite a number of rockets, among them very big ones, use nitric acid as a substitute for oxygen.

When rockets using nitric acid were still comparatively small somebody asked whether one should not have a look at fluorine. Fluorine behaves like oxygen, only more so. It reacts with practically anything it can reach, even causing flames in the process. Most of the time no ignition is needed. The compounds produced are fluorides instead of oxides but

a description of fluorine as a super-active oxygen is reasonably correct. One has to add, though, that it is horribly poisonous. Hence pure fluorine was unlikely to find practical application on a large scale. But how about fluorine-rich substances which might do the job with somewhat dampened violence?

The Office of Naval Research thought that the idea deserved some investigation and gave a contract to the research division of the Propellant Chemistry section of Rocketdyne, builder of rocket engines in Canoga Park, California. The manager of the research division, E. A. Lawton, gave the assignment to Dr. Walter Maya and Dr. Maya went to work. This was in 1961.

The work involved a mixture of fluorine and chlorine both of which are gases at room temperature. Compounds of fluorine and chlorine then known included ClF , consisting of just one atom of each, and ClF_3 , chlorine trifluoride. The gases behaved as expected but left just a trace of another compound. There was so little of it that all one could say at the moment was that the unexpected—and possibly new—compound strongly absorbed radiation of a wavelength of 13.7 microns, which is in the infrared region of the spectrum.

The next step was obvious, though very difficult. It entailed

making enough of the compound for its molecular weight to be determined. The weight turned out to be $130\frac{1}{2}$. That awkward $\frac{1}{2}$ was, of course, due to chlorine; subtracting $35\frac{1}{2}$ from $130\frac{1}{2}$ gave 95 which is five times the weight of the fluorine atom. If the new compound did not contain anything else the substance had to be chlorine pentafluoride, something that had never been made before, one atom of chlorine holding on to five atoms of fluorine. The next step was to prove that the compound consisted of chlorine and fluorine only.

Once that was done and the nature of the new compound had been definitely established it was comparatively easy to think of a number of ways of making it—the reaction by which it had been obtained originally was much too slow to satisfy anybody. One better way was via a compound with the metal cesium, CsClF_4 , cesium chlorotetrafluoride, reacting with more fluorine. The gas formed after condensation proved to be ClF_5 . In 1963 the researchers had about 15 pounds of the new compound—enough to establish all its characteristics.

Chlorine pentafluoride is colorless, both as a liquid and as a gas. Its odor is similar to that of fluorine—it is toxic but far less violent than pure fluorine. Below *minus* 103 degrees cen-

tigrade (= *minus* 153.4 degrees Fahrenheit) it is solid. Above *minus* 14 degrees centigrade (= 7.3 degrees Fahrenheit) it is a gas. Its density is 2.022 grams per cubic centimeter at *minus* 54 degrees centigrade (= *minus* 65 degrees Fahrenheit) while the density is 1.793 grams per cubic inch at 20 degrees centigrade (= 68 degrees Fahrenheit).

The precise molecular weight is 130.44.

The question of how ClF_5 will do in a rocket engine has only theoretical answers so far. If Rocketdyne has run any actual tests on the teststands they don't say so. Its value as a fluoridizer is about the same as that of liquid oxygen as an oxidizer. But ClF_5 can be stored (under its own vapor pressure) at normal temperatures. It has the advantage of being heavier than liquid oxygen which means that more of it can be put into a given tank. A likely rocket fuel for use with ClF_5 is hydrazine, the mixture ratio being about 2.6 parts (by weight) to one part of hydrazine.

And that is as far as the story has progressed at the moment.

Picture Writing in Our Time

THE place of the story was and still is one of the Frisian islands in the North Sea. The time was the summer of 1912, vacation

time, and one of the vacationers on that island was a staff member of the Ethnographic Museum in Leipzig.

There was not much a vacationer could do in such a place in those days. One could go swim-

made by the old woman to assist her memory about the errands she ran.

The ethnologist, for a tip, acquired a no longer needed page of the notebook (see figure) and the explanation. The round object



ming, one could watch seagulls and sandpipers and one could also watch people. Among the people the vacationer watched was an old woman who bustled around from house to house and came to the inn with packages. The innkeeper, when asked, said that the old woman was a general messenger, the illiterate widow of a fisherman. She earned a little money by running errands.

The ethnologist was not especially curious until he watched the old woman scribbling in a notebook—hadn't the innkeeper said that she, like most others of her generation, was still illiterate? He managed to get a look at the notebook. It did not contain a single letter but was full of pictures that looked like childish drawings. They had been

at the extreme left in the top row that might be a picture of a potato actually meant rice the old woman had been asked to fetch from town. The second object meant soup greens. The circle with two lines meant a sponge on a string and the square next to it meant a portable slate, then customary for grades one, two and three in grade schools. Somebody was learning to write! The sketch to the right of the slate was supposed to be a pot, the sign next to it that looks like a small *b* probably indicated the customer. The sign is repeated once more later.

To the right of the pot we have a somewhat drastic pictogram, somebody wanted "worming medicine"—whether for man or beast is unclear. To the right of

Astronautics International

it a cluster of signs referred to wine. The bottle shape is the general indicator. The repeated *b* meant the same customer who wanted the pot. The four circles meant four bottles. The sign at the extreme right in the top row was supposed to show a pig—but not a live one. It was intended to be read as ham or pork.

The drawing to the left in the bottom row is a whole sentence: the messenger was to tell the butcher that he should come to the village to slaughter a pig and that he should bring two pig bladders with him. The drawing to the right in the bottom row meant: deliver a letter from the blacksmith to his wife-to-be.

The page from the notebook of the messenger woman was placed into the archives of the museum in Leipzig. An enlarged photograph was put on public display. Learned discussion of the find was not too fruitful. The old woman knew of writing—she simply could not do it herself. So she had invented a substitute. But what would she have done if nobody in her area knew how to read and write—in other words if the concept of writing had been unknown to her?

Nobody could answer that question, of course.

But that interesting notebook leaf still indicates how writing, elsewhere, and several thousands of years earlier, must have started.

NOT quite two years ago, in the December, 1967, issue of *Galaxy*, I pointed out that the conquest of space was not just a race between the Soviet Union and the United States. Other countries also contributed. I spoke about the French satellites; there were a total of five, three of them orbited by the French *Diamant* rocket. I spoke of the Italian satellites, two of them, and of the British and Canadian satellites, all of which were collaborations with the United States. The countries in question had furnished the satellites. The United States had furnished the rockets.

Since then more things have happened in that field. At about the time the readers of *Galaxy* read that particular issue an American rocket roared into the sky from the Australian Woomera Proving Ground, carrying an Australian satellite. Its designation was WRESAT, meaning (Australian) Weapons Research Establishment Satellite. It was orbited on November 29, 1967, and stayed in orbit until January 10, 1968.

The next three international satellites that were successfully orbited—one was destroyed by one of the rare failures of the

Scout rocket—all belonged to ESRO, the European Space Research Organization. ESRO-II, the first to reach orbit, is called *Iris*. It was put into orbit on May 17, 1968, and is still orbiting. ESRO-I, named *Aurora*, followed on October 3, 1968, and is also still in orbit. The third of the three ESRO satellites is the most interesting.

It is called HEOS-A; the letters stand for High Eccentricity Orbit Satellite and the eccentricity is indeed high. The perigee of that satellite is only 273 miles from the surface but its apogee is 139,458 miles out in space, a little more than halfway to the moon. It takes 105 hours and 51.8 minutes for the satellite to complete one of its orbits. Its purpose is to see—among other things—what magnetic fields are doing inside the orbit of the moon.

It was launched on December 5, 1968, and its working life is expected to be about one year. Afterwards it will continue orbiting for a long time. Its weight is 238 lbs.

The successful launch of this satellite made the Europeans feel a little better about a failure they had experienced only a week earlier. The ELDO (European Launcher Development Organization) has spent years developing a three-stage satellite launch vehicle, named *Europa-1*. There had been a few failures but the rocket

that was on the launch pad at the new French firing range in French Guiana promised to behave. The first stage, a British *Blue Streak*, did function as planned and so did the second stage, the French *Coralie*, which had given trouble in earlier flights. When the third stage, the German *Astris*, separated from the *Coralie* and ignited properly everybody was convinced that it would put the Italian-built satellite into orbit. But after seven seconds of firing the *Astris* cut off and both it and the satellite crashed somewhere. The researchers are not even sure where impact took place, because at the instant of engine cut-off all telemetry cut off, too, and the trackers lost the vehicle.

Since then Canadian-American collaboration has put another Canadian satellite into orbit, on January 30, 1969. It is called ISIS, meaning International Satellite for Ionosphere Studies.

European plans for the future are quite diversified. The French have stated that they are developing a larger version of their *Diamant* satellite launcher. But even the larger *Diamant* will not be able to orbit the French *Roseau* satellite now under construction in Toulouse. During a Franco-Soviet Scientific Cooperation Conference, held in that French city in November 1968, it was

(Please turn to page 158)



Dune Messiah

FRANK HERBERT

WHAT HAS GONE BEFORE

Dune was an arid planet, inhabited by gigantic sandworms and wild Fremen whose customs were based on water scarcity. Its only resource was melange, an addictive drug produced by the worms. This "spice" aided longevity and gave an adept visions of the future.

After the murder of his noble

father, PAUL ATRIDES was dumped into the desert, together with his pregnant mother, the LADY JESSICA, who had been trained by the Bene Gesserit—a female order devoted to mental arts and the control of genetic lines to produce a "kwisatz haderach", a messiah capable of using psi powers. Paul was to be their instrument.

In learning to live with the Fremen, Paul was forced to take an

overdose of drug. This opened his mind permanently to the future—or futures. Lady Jessica also took an overdose with the result that ALIA, Paul's sister, was born with full knowledge of all her mother had known.

Paul, by then also known as MUAD'DIB, eventually led the Fremen against the Harkonnen rulers and their Sardaukar soldiers. In the battle, Paul's old friend and teacher, DUNCAN IDAHO, was killed. As ruler, Paul took the Harkonnen heir, PRINCESS IRULAN, as his consort—but refused to consummate the marriage, remaining true to the Fremen woman CHANI.

Now, twelve years later, Paul has made the desert bloom and he rules a mighty empire of stars. He has become almost a god to the Qizarate, a cult built around his visions. Against it, the other quasi-political and quasi-religious, forces of humanity have just begun to unite.

Among these is the Bene Gesserit, headed by the Reverend Mother GAIUS HELEN MOHIAM, working through the weak help of their trainee, Princess Irulan. More or less with them is the Bene Tleilax, supposedly amoral scientists; their representative is the Tleilaxu Face Dancer SCYTALE, who can look like any man or woman. The two groups have the aid of the Spacing Guild, which must control the melange trade, since only spice visions make interstellar navigation possible. Their Steersman EDRIC is more fishlike than hu-

man and must live in a tank. His main function is to obscure Paul's visions with his own gift so their plotting will not be detected.

They send Princess Irulan back to Paul to demand he give her an heir; she has so far kept Chani sterile by adding drugs to the Fremen woman's food. Paul refuses. He is filled with bitter visions, unsure but what he is the very instrument of the future he tries to avoid. He is sure, however, that a royal heir by Irulan will destroy all hope.

Paul detects the Reverend Mother on Edric's ship and has her arrested. But Scytale and BIJAZ, a created Tleilaxu dwarf, escape.

Scytale secretly visits a Fremen quarter to gain information. He leaves Bijaz behind but takes with him the semuta-addicted daughter of OTHEYM, a bitter old desert fighter. Her name is LICHNA.

During an interview with Edric, Paul learns nothing. The presence of the Steersman muddies all his future visions. It also upsets STILGAR, his minister of state, and KORBA, head of the Qizarate. Paul can only determine that the Reverend Mother has suggested that Princess Irulan have Chani killed, since Paul's mate now refuses the food containing the sterility drug.

Edric then makes Paul a shocking present—something that looks like Duncan Idaho, except for metallic eyes. It is a ghola—Duncan's body has been regrown from its cell patterns by

Tleilaxu science. But it has no memories from its former life and is now named HAYT. Paul is disturbed by the fact that he saw no vision of Duncan's return. He asks the purpose of the gift, and Hayt answers: "I have been sent to destroy you." But Hayt does not know how it will come about. He tells Paul to send him away—but Paul cannot, since Duncan was once so close to him.

Alia is sent to study the body of a girl found in the desert. She can learn little, except that the corpse shows signs of semuta-addiction, but she is sure it indicates some grave danger. On the way back, Hayt reveals signs of being the real Duncan Idaho, and she is attracted to him in spite of herself. When he kisses her, she protests; but he tells her he only did what she wanted.

On the verge of new struggles of empire, Paul finds nothing going well. There are reports of treason among the Fremmen and an attempt to steal a worm and develop melange on another world—one Paul cannot see.

X

I think what a joy it is to be alive, and I wonder if I'll ever leap inward to the root of this flesh and know myself as once I was. The root is there. Whether any act of mine can find it, that remains tangled in the future. But all things a man can do are mine.

—The Gholia Speaks
Alia's Commentary

AS HE LAY there deep immersed in the screaming odor of the spice, staring inward through the oracular trance, Paul saw the moon as it became an elongated sphere. It rolled and twisted, hissing—the terrible hissing of a star being quenched in an infinite sea—like a ball thrown by a child.

It was gone.

This moon had not yet set. Realization engulfed him. It was gone: no moon. The earth quaked like an animal shaking its skin. Terror swept over him.

Paul jerked upright on his pallet, eyes wide open, staring. Part of him looked outward, part inward. Outwardly, he saw the plasmeld grillwork which vented his private room, and he knew he lay beside a stonelike abyss of his Keep. Inwardly, he continued to see the moon fall.

Out! Out!

His grillwork of plasmeld looked onto the blazing light of noon across Arrakeen. Inward—there lay blackest night. A shower of sweet odors from a garden roof nibbled at his senses, but no floral perfume could roll back that fallen moon.

Paul swung his feet to the cold surface of the floor, and he peered through the grillwork. He could see directly across to the gentle arc of a footbridge constructed of crystal-stabilized gold and platinum. Fire jewels from far Cedon decorated the bridge. It led to the galleries of the inner city across a pool and fountain filled with waterflowers. If he stood, Paul knew, he could look down

into petals as clean and red as fresh blood whirling, turning there—discs of ambient color tossed on an emerald freshet.

His eyes absorbed the scene without pulling him from spice thralldom.

That terrible vision of a lost moon.

The vision suggested to him a monstrous loss of individual security. Perhaps he'd seen his civilization fall, toppled by its own pretensions.

A moon . . . a moon . . . a falling moon.

It had taken a massive dose of the spice essence to penetrate the mud thrown up by the tarot. All it had shown him was a falling moon and the hateful way he'd known from the beginning. To buy an end for the Jihad, to silence the volcano of butchery, he must discredit himself.

Disengage . . . disengage . . . disengage . . .

Floral perfume from the garden roof reminded him of Chani. He longed for her arms now, for the clinging arms of love and forgetfulness. But even Chani could not exorcise this vision. What would Chani say if he went to her with the statement that he had a particular death in mind? Knowing it to be inevitable, why not choose an aristocrat's death, ending life on a secret flourish, squandering any years that might have been? To die before coming to the end of willpower, was that not an aristocrat's choice?

HE STOOD, crossed to the lapped opening in the grillwork and

DUNE MESSIAH

went out onto a balcony which looked upward to flowers and vines trailing from the garden. His mouth held the dryness of a desert march.

Moon . . . moon—where is that moon?

He thought of Alia's description, the young woman's body found in the dunes. A Fremen addicted to *semuta!* Everything fitted the hateful pattern.

You do not take from this universe, he thought. It grants what it will.

The remains of a conch shell from the seas of Mother Earth lay on a low table beside the balcony rail. He took its lustrous smoothness into his hands, tried to feel backward in Time. The pearl surface reflected glittering moons of light. He tore his gaze from it and peered upward past the garden to a sky become a conflagration—trails of rainbow dust shining in the silver sun.

My Fremen call themselves 'Children of the Moon . . .'

He put down the conch, strode along the balcony. Did that terrifying moon hold out hope of escape?

He probed for meaning in the region of mystic communion. He felt weak, shaken, still gripped by the spice.

At the north end of his plasmeld chasm, he came in sight of the lower buildings of the government warren. Foot traffic thronged the roof walks. He felt that the people moved there like a frieze against a background of doors, walls and tile designs. The

people were tiles! When he blinked, he could hold them frozen in his mind. A frieze.

A moon falls and is gone.

A feeling came over him that the city out there had been translated into an odd symbol for his universe. The buildings he could see had been erected on the plain where his Fremens had obliterated the Sardaukar legions. Ground once trampled by battles rang now to the rushing clamor of business.

Keeping to the balcony's outer edge, Paul strode around the corner. Now, his vista was a suburb where all the city structures lost themselves in rocks and the blowing sand of the desert. Alia's temple dominated the foreground; green and black hangings along its two-thousand-meter sides displayed the rising moon symbol of Muad'dib.

A falling moon.

Paul passed a hand across his forehead and eyes. The symbol-metropolis oppressed him. He despised his own thoughts. Such vacillation in another would have aroused his anger.

He loathed his city!

Rage firmly rooted in boredom flickered and simmered deep within him, nurtured by decisions that couldn't be avoided. He knew which path his feet must follow. He'd seen it enough times, hadn't he? *Seen* it! Once . . . long ago he'd thought of himself as an inventor of government. But the invention had fallen into old patterns. It was like some hideous contrivance with plastic memory.

Shape it any way you wanted, but relax for a moment, and it snapped into the ancient forms. Forces at work beyond his reach in human breasts eluded and defied him.

PAUL STARED out across the rooftops. What treasures of untrammelled life lay beneath those roofs? He glimpsed leaf-green places, open plantings amidst the chalk-red and gold of the roofs. Green, the gift of Muad'dib and his water. Orchards and groves lay within his view—open plantings to rival those of fabled Lebanon.

"Muad'dib spends water like a madman," Fremens said.

Paul covered his eyes.

The moon fell.

He dropped his hands, stared at his metropolis with clarified vision. Buildings took on an aura of monstrous imperial barbarity. They stood enormous and bright beneath the northern sun. Colossi! Every extravagance of architecture a demented history could produce lay within his view: terraces of mesa proportion, squares as large as some cities, parks, premises, small bits of cultured wilderness.

Superb artistry abutted inexplicable prodigies of dismal tastelessness. Details impressed themselves upon him: a postern out of most ancient Baghdad . . . a dome that was dreamed in fabled Damascus . . . an arch from the effect of unrivaled magnificence.

A moon! A moon! A moon!

Frustration tangled him. He felt the pressure of mass-unconscious,

that burgeoning sweep of humankind across his universe. They rushed upon him with a force like a gigantic tidal bore. He sensed the vast migrations at work in human affairs: eddies, currents, gene flows. No dams of abstinence, no seizures of impotence nor maledictions could stop it.

Muad'dib's Jihad was less than an eye blink in this larger movement. The Bene Gesserit swimming in this tide, that corporate entity trading in genes, was trapped in the torrent as he was. Visions of a falling moon must be measured against many other legends, other visions found in a universe where even the seemingly eternal stars waned, flickered, died . . .

What mattered a single moon in such a universe?

Far within his fortress citadel, so deep within that the sound sometimes lost itself in the flow of city noises, a ten-string rebaba tinkled with a song of the Jihad, a lament for a woman left behind on Arrakis—

*"Her hips are dunes curved by
the wind,*

*Her eyes shine like summer heat.
Two braids of hair hang down
her back—*

*Rich with water rings, her hair!
My hands remember her skin,
Fragrant as amber, flower-
scented.*

*Eyelids tremble with
memories . . .*

*I am stricken by love's white
flame!"*

The song sickened him. A tune for stupid creatures lost in sentimentality! As well sing to the dune-impregnated corpse Alia had seen.

A FIGURE moved in shadows of the balcony's grillwork. Paul whirled.

The ghola emerged into the sun's full glare. His metal eyes glittered.

"Is it Duncan Idaho or the man called Hayt?" Paul asked.

The ghola came to a stop two paces from him. "Which would my Lord prefer?"

The voice carried a soft ring of caution.

"Play the Zensunni," Paul said bitterly. *Meanings within meanings!* What could a Zensunni philosopher say or do to change one jot of the reality unrolling before them at this instant?

"My Lord is troubled."

Paul turned away, stared at the Shield Wall's distant scrap, saw wind-carved arches and butresses, terrible mimicry of his city. Nature playing a joke on him! *See what I can build!* He recognized a slash in the distant massif, a place where sand spilled from a crevasse, and thought: *There! Right there, we fought Sardaukar!*

"What troubles my Lord?" the ghola asked.

"A vision," Paul whispered.

"Ahhhhh, when the Tleilaxu first awakened me, I had visions. I was restless, lonely . . . not really knowing I was lonely. Not then. My visions revealed nothing! The

Tleilaxu told me it was an intrusion of the flesh which men and gholas all suffer, a sickness, no more."

Paul turned, studied the gholas' eyes, those pitted, steely balls without expression. What visions did those eyes see?

"Duncan . . . Duncan . . ." Paul whispered.

"I am called Hayt."

"I saw a moon fall," Paul said. "It was gone, destroyed. I heard a great hissing. The earth shook."

"You are drunk on too much time," the gholas said.

"I ask for the Zensunni and get the mentat!" Paul said. "Very well! Play my vision through your logic, mentat. Analyze it and reduce it to mere words laid out for burial."

"Burial, indeed," the gholas said. "You run from death. You strain at the next instant, refuse to live here and now. Augury! What a crutch for an Emperor!"

Paul found himself fascinated by a well-remembered mole on the gholas' chin.

"Trying to live in this future," the gholas said, "do you give substance to such a future? Do you make it real?"

"If I go the way of my vision-future, I'll be alive *then*," Paul muttered. "What makes you think I want to live there?"

The gholas shrugged. "You asked me for a substantial answer."

"Where is there substance in a universe composed of events?" Paul asked. "Is there a final answer? Doesn't each solution produce new questions?"

"You've digested so much time you have delusions of immortality," the gholas said. "Even *your* Empire, my Lord, must live its time and die."

"Don't start to parade smoke-blackened altars before me," Paul growled. "I've heard enough sad histories of gods and messiahs. Why should I need special powers to forecast ruins of my own like all those others? The lowliest servant of my kitchens could do this." He shook his head. "The moon fell!"

"You've not brought your mind to rest at its beginning."

"Is that how you destroy me?" Paul demanded. "Prevent me from collecting my thoughts?"

"Can you collect chaos?" the gholas asked. "We Zensunni say: 'Not collecting, that is the ultimate gathering.' What can you gather without gathering yourself?"

"I'm deviled by a vision and you spew nonsense!" Paul raged. "What do you know of prescience?"

"I've seen the oracle at work," the gholas said. "I've seen those who seek signs and omens for their individual destiny. They fear what they seek."

"My falling moon is real," Paul whispered. He took a trembling breath. "It moves. It moves."

"Men always fear things which move by themselves," the gholas said. "You fear your own powers. Things fall into your head from nowhere. When they fall out, where do they go?"

"You comfort me with thorns," Paul growled.

An inner illumination came over the ghola's face. For a moment, he became pure Duncan Idaho, a storehouse of relic memories. "I give you what comfort I can," he said.

Paul wondered at that momentary spasm. Had the ghola felt grief which his mind rejected? Had Hayt put down a vision of his own?

"My moon has a name," Paul whispered.

He let the vision flow over him then. Though his whole being shrieked, no sound escaped him. He was afraid to speak, fearful that his voice might betray him. The air of this terrifying future was thick with Chani's absence. Flesh that had cried in ecstasy, eyes that had burned him with their desire, the voice that had charmed him because it played no tricks of subtle control—all gone, back into the water and the sand.

Slowly, Paul turned away and looked out at the present and the plaza before Alia's temple. Three shaven-headed pilgrims entered from the processional avenue. They wore grimy yellow robes and hurried with their heads bent against the afternoon's wind. One walked with a limp, dragging his left foot. They beat their way against the wind, rounded a corner and were gone from his sight.

Just as his moon would go, they were gone. Still, his vision lay before him. Its terrible purpose gave him no choice.

The flesh surrenders itself, he thought. *Eternity takes back its*

own. Our bodies stirred these waters briefly, danced with a certain intoxication before the love of life and self, dealt with a few strange ideas, then submitted to the instruments of Time. What can we say of this? 'I occurred. I am not . . . yet, I occurred.'

XI

Beg not the sun for mercy.

—Maud'dib's Travail

From the Stilgar Commentary

ONE moment of incompetence can be fatal, the Reverend Mother Gaius Helen Mohiam reminded herself.

She hobbled along, apparently unconcerned, within a ring of Fremen guards. One of those behind her, she knew, was a deaf mute immune to any wiles of voice. No doubt he had been charged to kill her at the slightest provocation.

Why had Paul summoned her? Was he about to pass sentence? She remembered the day long ago when she'd tested him. . . the child *Kwisatz Haderach*. He was a deep one.

Damn his mother for all eternity! It was her fault the Bene Gesserit had lost their hold on this gene line.

Silence surged along the vaulted passages ahead of her entourage. She sensed the word being passed. Paul would hear the silence. He'd know of her coming before it was announced. She didn't delude herself with ideas that her powers exceeded his.

Damn him!

She begrudged the burdens age had imposed on her—the aching joints, responses not as quick as once they'd been, muscles not as elastic as the whipchords of her youth. A long day lay behind her and a long life. She'd spent this day with the Dune Tarot in a fruitless search for some clue to her own fate. But the cards were sluggish.

The guards herded her around a corner into another of the silent, seemingly endless vaulted passages. Triangular metaglass windows on her left gave a view upward to trellised vines and indigo flowers in deep shadows cast by the afternoon sun. Tiles lay underfoot—figures of water creatures from exotic planets.

Robed figures passed across another hall in front of her, casting covert glances at the Reverend Mother. Recognition was obvious in their manner—and tension.

She kept her attention on the sharp hairline of the guard immediately in front—young flesh, pink creases at the uniform collar.

Now an open doorway from which emerged the sound of timbrel and flute playing soft, elder music. A glance showed her blue-in-blue Fremmen eyes staring from the room. She sensed in them the ferment of legendary revolts stirring in wild genes.

There lay the measure of her personal burden, she knew. A Bene Gesserit could not escape awareness of the genes and their possibilities. She was touched by a feeling of loss: that stubborn

fool of an Atreides! How could he deny the jewels of posterity within his loins? A Kwisatz Haderach! Born out of his time, true, but real—as real as his abomination of a sister...and there lay a dangerous unknown. A wild Reverend Mother spawned without Bene Gesserit inhibitions, holding no loyalty to orderly development of the genes. She shared her brother's powers, no doubt—and more.

THE size of the citadel began to oppress her. Would the passages never end? The place reeked of terrifying physical power. No planet, no civilization in all human history had ever before seen such man-made immensity. A dozen ancient cities could be hidden within its walls!

They passed oval doors with winking lights. She recognized them for Ixian handiwork: pneumatic transport orifices. Why was she being marched all this distance, then? The answer began to shape itself in her mind—to oppress her in preparation for this audience with the Emperor.

A small clue, but it joined other subtle indications—the relative suppression and selection of words by her escort, the traces of primitive shyness in their eyes when they called her *Reverend Mother*, the cold and bland, essentially odorless nature of these halls—all combined to reveal much that a Bene Gesserit could interpret.

Paul wanted something from her!

She concealed a feeling of elation. A bargaining lever existed. It remained only to find the nature of that lever and test its strength. Some levers had moved things greater than this citadel. A finger's touch had been known to topple civilizations.

The Reverend Mother reminded herself then of Scytale's assessment: *When a creature has developed into one thing, he will choose death rather than change into his opposite.*

The passages through which she was being escorted grew larger by subtle stages—tricks of arching, graduated amplification of pillared supports, displacement of the triangular windows by larger, oblong shapes. Ahead of her, finally, loomed double doors centered in the far wall of a tall antechamber. She sensed that the doors were very large, and was forced to suppress a gasp as her trained awareness measured out the true proportions. The doorway stood at least eighty meters high, half that in width.

As she approached with her escort, the doors swung inward—an immense and silent movement of hidden machinery. She recognized more Ixian handiwork. Through that towering doorway she marched with her guards into the Grand Reception Hall of the Emperor Paul Atreides—"Muad'dib, before whom all people are dwarfed."

As she advanced toward Paul on the distant throne, the Reverend Mother found herself more impressed by the architec-

tural subtleties of her surroundings than she was by the immensities. The space was large; it could have housed the entire citadel of any ruler in human history. The open sweep of the room said much about hidden beams behind these walls and the far away domed ceiling must surpass anything ever before attempted. Everything spoke of engineering genius.

Without seeming to do so, the hall grew smaller at its far end, refusing to dwarf Paul on his throne centered on a dais. An untrained awareness, shocked by surrounding proportions, would see him at first as many times larger than his actual size. Colors played upon the unprotected psyche; Paul's green throne had been cut from a single Hagar emerald. It suggested growing things and, out of the Fremen mythos, reflected the mourning color. It whispered that here sat the one who could make you mourn—life and death in one symbol, a clever stress of opposites. Behind the throne, draperies cascaded in burnt orange, curried gold of Dune earth, and cinnamon flecks of melange. To a trained eye, the symbolism was obvious, but it contained hammer blows to beat down the uninitiated.

Time played its role here.

THE Reverend Mother measured the minutes required to approach the Imperial Presence at her hobbling pace. You had time to be cowed. Any tendency

toward resentment would be squeezed out of you by the unbridled power which focused down upon your person. You might start the long march toward that throne as a human of dignity, but you ended the march as a gnat.

Aides and attendants stood around the Emperor in a curiously ordered sequence—attentive household guardsmen along the draped back wall; that abomination, Alia, two steps below Paul and on his left hand; Stilgar, the Imperial lackey, on the step directly below Alia; and on the right, one step up from the floor of the hall, a solitary figure, the fleshly revenant of Duncan Idaho, the ghola. She marked older Fremmen among the guardsmen, bearded Naibs with stillsuit scars on their noses, sheathed crysknives at their waists, a few maula pistols, even some lasguns. Those must be trusted men, she thought, to carry lasguns in Paul's presence when he obviously wore a shield generator. She could see the shimmering of its field around him. One burst of a lasgun into that field and the entire citadel would be a hole in the ground.

Her guard stopped ten paces from the foot of the dais and parted to open an unobstructed view of the Emperor. She noted now the absence of Chani and Irulan, and wondered at it. He held no important audience without them, so it was said.

Paul nodded to her, silent, measuring.

Immediately, she decided to

take the offensive. She said: "So, the great Paul Atrides deigns to see the one he banished."

Paul smiled wryly, thinking: *She knows I want something from her.* That knowledge had been inevitable, she being who she was. He recognized her powers. The Bene Gesserit didn't become Reverend Mothers by chance.

"Shall we dispense with fencing?" he asked.

And she said: "Name the thing you want."

Stilgar stirred, casting a sharp glance at Paul. The Imperial lackey didn't like her tone.

"Stilgar wants me to send you away," Paul said.

"Not kill me?" she asked. "I would have expected something more direct from a Fremmen Naib."

Stilgar scowled and said: "Often, I must speak otherwise than I think. That is called diplomacy."

"Then let us dispense with diplomacy, as well," she said. "Was it necessary to have me walk all that distance? I am an old woman."

"You had to be shown how callous I can be," Paul said. "That way, you'll appreciate magnanimity."

"You dare such gaucheries with a Bene Gesserit?" she asked.

"Gross actions carry their own messages," Paul said.

She hesitated, weighing his words. So—he might yet dispense with her. . . grossly, obviously, if she. . . if she what?

"Say what it is you want from me," she muttered.

"You must be careful how you

speak to me, old woman," Paul said.

HE CALLED me that when he was a stripling, the Reverend Mother thought. Does he remind me now of my hand in his past? The decision I made then, must I remake it here? She felt the weight of decision, a physical thing that set her knees to trembling. Muscles cried their fatigue.

"It was a long walk," Paul said, "and I can see that you're tired. We will retire to my private chamber behind the throne. You may sit there." He gave a hand signal to Stilgar and arose.

Stilgar and the gholas converged on her; they helped her up the steps and followed Paul through a passage concealed by the draperies. She realized then why he had greeted her in the hall—a dumb show for the guards and Naibs. He feared them, then. And now—now, he displayed kindly benevolence, daring such wiles on a Bene Gesserit. Or was it daring? She sensed another presence behind and glanced back to see Alia following. The younger woman's eyes held a brooding baleful cast.

The private chamber at the end of the passage was a twenty-meter cube of plasmeld, with yellow glowglobes for light and the deep orange hangings of a desert stilltent around the walls. It contained divans, soft cushions, a faint odor of melange, crystal water flagons on a low table. It felt cramped, tiny after the outer hall.

Paul seated her on a divan and stood over her, studying the ancient face—steely teeth, eyes that hid more than they revealed, deeply wrinkled skin. He indicated a water flagon. She shook her head, dislodging a wisp of gray hair.

In a low voice, Paul said: "I wish to bargain with you for the life of my beloved."

Stilgar cleared his throat.

Alia fingered the handle of the crysknife sheathed at her neck.

The gholas remained at the door, face impassive, metal eyes pointed at the air above the Reverend Mother's head.

"Have you had a vision of my hand in her death?" the Reverend Mother asked. She kept her attention on the gholas, oddly disturbed by him. Why should she feel threatened by the gholas? He was a tool of the conspiracy.

"I know what it is you want from me," Paul said, avoiding her question.

Then he only suspects, she thought. The Reverend Mother looked down at the tips of her shoes exposed by a fold of her robe. Black. . . black. . . shoes and robe showed marks of her confinement: stains, wrinkles. She lifted her chin and met an angry glare in Paul's eyes. Elation surged through her, but she hid the emotion behind slitted eyelids.

"What coin do you offer?" she asked.

"You may have my seed, but not my person," Paul said. "Irulan banished and inseminated by artificial. . ."

"You dare!" the Reverend Mother flared, stiffening.

Stilgar took a half step forward.

DISCONCERTINGLY, the ghola smiled. And now, Alia was studying him.

"We'll not discuss the things your Sisterhood forbids," Paul said. "I will listen to no talk of sins, abominations or the beliefs left over from past Jihads. You may have my seed for your plans, but no child of Irulan's will sit on my throne."

"Your throne," she sneered.

"My throne."

"Then who will bear the Imperial heir?"

"Chani."

"She is barren."

"She is with child."

An involuntary indrawn breath exposed her shock. "You lie!" she snapped.

Paul held up a restraining hand as Stilgar surged forward.

"We've known for two days that she carries my child."

"But Irulan. . ."

"By artificial means only. That's my offer."

The Reverend Mother closed her eyes to hide his face. Damnation! To cast the genetic dice in such a way! Loathing boiled in her breast. The teachings of the Bene Gesserit, the lessons of the Butlerian Jihad—all proscribed such an act. One did not demean the highest aspirations of humankind. No machine could function in the way of a human mind. No word or deed could

imply that men might be bred on the level of animals.

She shook her head. The genes, the precious Atreides genes—only these were important. Need went deeper than proscription. For the Sisterhood, mating mingled more than sperm and ovum. One aimed to capture the psyche.

The Reverend Mother understood now the subtle depths of Paul's offer. He would make the Bene Gesserit party to an act which would bring down popular wrath. . . were it ever discovered. They could not admit such paternity if the Emperor denied it. This coin might save the Atreides genes for the Sisterhood, but it would never buy a throne.

She swept her gaze around the room, studying each face: Stilgar, passive and waiting now; the ghola frozen at some inward place; Alia watching the ghola. . . and Paul—wrath beneath a shallow veneer.

"This is your only offer?" she asked.

"My only offer."

She glanced at the ghola, caught by a brief movement of muscles across his cheeks. Emotion? "You, ghola," she said. "Should such an offer be made? Having been made, should it be accepted? Function as the mentat for us."

The metallic eyes turned to Paul.

"Answer as you will," Paul said.

The ghola returned his gleaming attention to the Reverend Mother, shocking her once more by smiling. "An offer is only as

good as the real thing it buys," he said. "The exchange offered here is life-for-life, a high order of business."

Alia brushed a strand of coppery hair from her forehead. She said: "And what else is hidden in this bargain?"

The Reverend Mother refused to look at Alia, but the words burned in her mind. Yes, far deeper implications lay here. The sister was an abomination, true, but there could be no denying her status as a Reverend Mother with all the title implied. Gaius Helen Mohiam felt herself in this instant to be not one single person, but all the others who sat like tiny congeries in her memory. They were alert, every Reverend Mother she had absorbed in becoming a Priestess of the Sisterhood. Alia would be standing in the same situation here.

"What else?" the ghola asked. "One wonders why the witches of the Bene Gesserit have not used Tleilaxu methods."

GAIUS HELEN MOHIAM and all the Reverend Mothers within her shuddered. Yes, the Tleilaxu did loathsome things. If one let down the barriers to artificial insemination, was the next step a Tleilaxu one—controlled mutation?

Paul, observing the play of emotion around him, felt abruptly that he no longer knew these people. He could see only strangers. Even Alia was a stranger.

Alia said: "If we set the

Atreides genes adrift in a Bene Gesserit river, who knows what may result?"

Gaius Helen Mohiam's head snapped around, and she met Alia's gaze. For a flashing instant, they were two Reverend Mothers together, communing on a single thought: *What lay behind any Tleilaxu action? The ghola was a Tleilaxu thing. Had he put this plan into Paul's mind? Would Paul attempt to bargain directly with the Bene Tleilax?*

She broke her gaze from Alia's, feeling her own ambivalence and inadequacies. The pitfall of Bene Gesserit training, she reminded herself, lay in the powers granted; such powers predisposed one to vanity and pride. But power deluded those who used it. One tended to believe power could overcome any barrier...including one's own ignorance.

Only one thing stood paramount here for the Bene Gesserit, she told herself. That was the pyramid of generations which had reached an apex in Paul Atreides...and in his abomination of a sister. A wrong choice here and the pyramid would have to be rebuilt...starting generations back in the parallel lines and with breeding specimens lacking the choicest characteristics.

Controlled mutation, she thought. *Did the Tleilaxu really practice it? How tempting!* She shook her head, the better to rid it of such thoughts.

"You reject my proposal?" Paul asked.

"I'm thinking," she said.

And again, she looked at the sister. The optimum cross for this female Atreides had been lost...killed by Paul. Another possibility still remained, however—one which would cement the desired characteristic into an offspring. Paul dared offer animal breeding to the Bene Gesserit! How much was he really prepared to pay for his Chani's life? Would he accept a cross with his own sister?

Sparring for time, the Reverend Mother said: "Tell me, oh, flawless exemplar of all that's holy, has Irulan anything to say of your proposal?"

"Irulan will do what you tell her to do," Paul growled. *True enough*, Mohiam thought. She firmed her jaw, offered a new gambit: "There are two Atreides."

Paul, sensing something of what lay in the old witch's mind, felt blood darken his face. "Careful what you suggest," he said.

"You'd just use Irulan to gain your own ends, eh?" she asked.

"Wasn't she trained to be used?" Paul asked.

And we trained her, that's what he's saying, Mohiam thought. Well...Irulan's a divided coin. Was there another way to spend such a coin?

"Will you put Chani's child on the throne?" the Reverend Mother asked.

"On my throne," Paul said. He glanced at Alia, wondering suddenly if she knew the divergent possibilities in this exchange. Alia stood with eyes closed, an odd stillness-of-person about her. With

what inner force did she commune? Seeing his sister thus, Paul felt he'd been cast adrift. Alia stood on a shore that was receding from him.

THE Reverend Mother made her decision, she said: "This is too much for one person to decide. I must consult with my Council on Wallach. Will you permit a message?"

As though she needed my permission! Paul thought.

He said: "Agreed, then. But don't delay too long. I will not sit idly by while you debate."

"Will you bargain with the Bene Tleilax?" the ghola asked, his voice a sharp intrusion.

Alia's eyes popped open and she stared at the ghola as though she'd been awakened by a dangerous intruder.

"I've made no such decision," Paul said. "What I will do is go into the desert as soon as it can be arranged. Our child will be born in sietch."

"A wise decision," Stilgar intoned.

Alia refused to look at Stilgar. It was a wrong decision. She could feel this in every cell. Paul *must* know it. Why had he fixed himself upon such a path?

"Have the Bene Tleilax offered their services?" Alia asked. She saw Mohiam hanging on the answer.

Paul shook his head. "No." He glanced at Stilgar. "Stil, arrange for the message to be sent to Wallach."

Paul turned away, waiting while

Stilgar summoned guards, left with the old witch. He sensed Alia debating whether to confront him with more questions. She turned, instead, to the ghola.

"Mentat," she said, "will the Tleilaxu bid for favor with my brother?"

The ghola shrugged.

Paul felt his attention wander. *The Tleilaxu? No...not in the way Alia meant.* Her question revealed, though, that she had not seen the alternatives here. Well...vision varied from sybil to sybil. Why not a variance from brother to sister? Wandering...wandering... He came back from each thought with a start to pick up shards of the nearby conversation.

"...must know what the Tleilaxu..."

"...the fullness of data is always..."

"...healthy doubts where..."

Paul turned, looked at this sister and caught her attention. He knew she would see tears on his face and wonder at them. Let her wonder. Wondering was a kindness now. He glanced at the ghola, seeing only Duncan Idaho despite the metallic eyes. Sorrow and compassion warred in Paul. What might those metal eyes record?

There are many degrees of sight and many degrees of blindness, Paul thought. His mind turned to a paraphrase of the passage from the Orange Catholic Bible: *What senses do we lack that we cannot see another world all around us?*

Were those metal eyes another sense than sight?

Alia crossed to her brother, sensing his utter sadness. She touched a tear on his cheek with a Fremmen gesture of awe. "We must not grieve for those dear to us before their passing."

"Before their passing," Paul whispered. "Tell me, little sister, what is before?"

XII

I've had a bellyful of the god and priest business! You think I don't see my own myths? Consult your data once more, Hayt. I've insinuated my rites into the most elementary human acts. The people eat in the name of Maud'dib! They make love in my name, are born in my name—cross the street in my name. A roof beam cannot be raised in the lowliest hovel of far Gangishree without invoking the blessing of Maud'dib!

—Book of Diatribes
from the Hayt Chronicle

YOU risk much leaving your post and coming to me here at this time," Edric said, glaring through the walls of his tank at the Face Dancer.

"How weak and narrow is your thinking," Scytale said. "Who is it who comes to visit you?"

Edric hesitated, observing the hulk shape, heavy eyelids, blunt face. It was early in the day and Edric's metabolism had not yet cycled from night repose into full melange consumption.

"This is not the shape which walked the streets?" Edric asked.

"One would not look twice at some of the figures I have been today," Scytale said.

The chameleon thinks a change of shape will hide him from anything, Edric thought with rare insight. And he wondered if his presence in the conspiracy truly hid them from all oracular powers. The Emperor's sister, now...

Edric shook his head, stirring the orange gas of his tank. He said: "Why are you here?"

"The gift must be prodded to swifter action," Scytale said.

"That cannot be done."

"A way must be found," Scytale insisted.

"Why?"

"Things are not to my liking. The Emperor is trying to split us. Already he has made his bid to the Bene Gesserit."

"Oh, *that*."

"That! You must prod the gholas to..."

"You fashioned him, Tleilaxu," Edric said. "You know better than to ask this." He paused, moving closer to the transparent wall of his tank. "Or did you lie to us about this gift?"

"Lie?"

"You said the weapon was to be aimed and released, nothing more. Once the gholas was given we could not tamper."

"Any gholas can be disturbed," Scytale said. "You need do nothing more than question him about his original being."

"What will this do?"

"It will stir him to actions which will serve our purposes."

"He is a mentat with powers of logic and reason," Edric objected. "He may guess what I'm doing... or the sister. If her attention is focused upon..."

"Do you hide us from the sibyl or don't you?" Scytale asked.

"I'm not afraid of oracles," Edric said. "I'm concerned with logic, with real spies, with the physical powers of the Imperium, with control of the spice, with..."

"One can contemplate the Emperor and his powers comfortably if one remembers that all things are finite," Scytale said.

ODDLY, the Steersman recoiled in agitation, threshing his limbs like some weird newt. Scytale fought a sense of loathing at the sight. The Guild Navigator wore his usual dark leotard, bulging at the belt with various containers. Yet... he gave the impression of nakedness when he moved. It was the swimming, reaching movements, Scytale decided, and he was struck once more by the delicate linkages of their conspiracy. They were not a compatible group. That was weakness.

Edric's agitation subsided. He stared out at Scytale, vision colored by the orange gas which sustained him. What plot did the Face Dancer hold in reserve to save himself? The Tleilaxu was not acting in a predictable fashion. Evil omen.

Something in the Navigator's voice and actions told Scytale that the Guildsman feared the sister

more than the Emperor. This was an abrupt thought flashed on the screen of awareness. Disturbing. Had they overlooked something important about Alia? Would the ghola be sufficient weapon to destroy both?

"You know what is said of Alia?" Scytale asked, probing.

"What do you mean?" Again, the fish-man was agitated. "Never have culture and beauty had such a patroness," Scytale said.

"What is enduring about culture, beauty?" Edric demanded. "We will destroy both Atreides. Culture! They dispense culture the better to rule. Beauty! They promote the beauty which enslaves. They create a literate ignorance—easiest thing of all. They leave nothing to chance. Chains! Everything they do forges chains, enslaves. But slaves always revolt."

"The sister may wed and produce offspring," Scytale said.

"Why do you speak of the sister?" Edric asked.

"The Emperor may choose a mate for her," Scytale said.

"Let him choose. Already, it is too late."

"Even you cannot invent the next moment," Scytale warned. "You are not a creator...any more than are the Atreides." He nodded. "We must not presume too much."

"We aren't the ones to flap our tongues about creation," Edric protested. "We aren't the rabble trying to make a messiah out of Maud'dib. What is this nonsense?"

"It's this planet," Scytale said. "It raises questions."

"Planets don't speak!"

"This one does."

"Oh?"

"It speaks of creation. Sand blowing in the night, that is creation."

"Sand blowing..."

"When you awaken, the first light shows you the new world—all fresh and ready for your tracks."

Untracked sand? Creation? Edric felt knotted with sudden anxiety. The confinement of his tank, the surrounding room, everything closed in upon him, constricted him.

Tracks in sand.

"You talk like a Fremen," Edric said.

"This is a Fremen thought and it's instructive," Scytale agreed. "They speak of Mauad'dib's Jihad as leaving tracks in the universe in the same way that a Fremen tracks new sand. They've marked out a trail in men's lives."

"So?"

"Another night comes," Scytale said. "Winds blow."

"Yes," Edric said, "the Jihad is finite. Muad'dib has used his Jihad and..."

"He didn't use the Jihad," Scytale said. "The Jihad used him. I think he'd have stopped it if he could."

"If he could? All he had to do was..."

"**O**H, be still!" Scytale barked. "You can't stop a mental

epidemic. It leaps from person to person across parsecs. It's overwhelmingly contagious. It strikes at the unprotected side, in the place where we lodge the fragments of other such plagues. Who can stop such a thing? Muad'dib hasn't the antidote. The thing has roots in chaos. Can orders reach there?"

"Have you been infected then?" Edric asked. He turned slowly in the orange gas, wondering why Scytale's words carried such a tone of fear. Had the Face Dancer broken from the conspiracy? There was no way to peer into the future and examine this now. The future had become a muddy stream, clogged with prophets.

"We're all contaminated," Scytale said, and he reminded himself that Edric's intelligence had severe limits. How could this point be made that the Guildsman would understand it?

"But when we destroy him," Edric said, "the contagion..."

"I should leave you in this ignorance," Scytale said. "But my duties will not permit it. Besides, it's dangerous to all of us."

Edric recoiled, steady ing himself with a kick of one webbed foot which sent the orange gas whipping around his legs. "You speak strangely," he said.

"This whole thing is explosive," Scytale said in a calmer voice. "It's ready to shatter. When it goes, it will send bits of itself out through the centuries. Don't you see this?"

"We've dealt with religions

before," Edric protested. "If this new..."

"It is *not* just a religion!" Scytale said, wondering what the Reverend Mother would say to this harsh education of their fellow conspirator. "Religious government is something else. Muad'dib has crowded his Qizarate in everywhere, displaced the old functions of government. But he has no permanent civil service, no interlocking embassies. He has bishoprics, islands of authority. At the center of each island is a man. Men learn how to gain and hold personal power. Men are jealous."

"When they're divided, we'll absorb them one by one," Edric said with a complacent smile. "Cut off the head and the body will fall to..."

"This body has two heads," Scytale said.

"The sister...who may wed."

"Who will certainly wed."

"I don't like your tone, Scytale."

"And I don't like your ignorance."

"What if she does wed? Will that shake our plans?"

"It will shake the universe."

"But they're not unique. I, myself, possess powers which..."

"You're an infant. You toddle where they stride."

"They are *not* unique!"

"You forget, Guildsman, that we once made a Kwisatz Haderach. This is a being filled by the spectacle of Time. It is a form of existence which cannot be threatened without enclosing

yourself in the identical threat. Muad'dib knows we would attack his Chani. We must move faster than we have. You must get to the ghola, prod him as I have instructed."

"And if I do not?"

"We will feel the thunderbolt."

XIII

*Oh, worm of many teeth, canst
thou deny what has no cure?
The flesh and breath which lure
thee*

*To the ground of all beginnings
Feed on monsters twisting in a
door of fire!*

*Thou hast no robe in all thy attire
To cover intoxications of divinity
Or hide the burnings of desire!*

—Wormsong
from the Dunebook

PAUL had worked up a sweat on the practice floor using crysknife and short sword against the ghola. He stood now at a window looking down into the temple plaza and tried to imagine the scene with Chani at the clinic. She'd been taken ill at mid-morning, the sixth week of her pregnancy. The medics were the best. They'd call when they had news.

Murky afternoon sandclouds darkened the sky over the plaza. Fremen called such weather dirty air.

Would the medics never call? Each second struggled past, reluctant to enter his universe.

Waiting...waiting... The Bene Gesserit sent no word from

Wallach. Deliberately delaying, of course.

Prescient vision had recorded these moments, but he shielded his awareness from the oracle, preferring the role here of a timefish swimming not where he willed, but where the currents carried him. Destiny permitted no struggles now.

The ghola could be heard racking weapons, examining the equipment. Paul sighed, put a hand to his own belt and deactivated his shield. The tingling passage of its field ran down against his skin.

He'd face events when Chani came, Paul told himself. Time enough then to accept the fact that what he'd concealed from her had prolonged her life. Was it evil, he wondered, to prefer Chani to an heir? By what right did he make her choice for her? Foolish thoughts! Who could hesitate, given the alternatives—slave pits, bodily torture, agonizing sorrow...and worse.

He heard the door open, followed by Chani's footsteps.

Paul turned.

Murder sat on Chani's face. The wide Fremen belt which gathered the waist of her golden robe, the water rings worn as a necklace, one hand at her hip, never far from the knife, the trenchant stare which was her first inspection of a room, any room—everything about her stood now only as a background for violence.

He opened his arms as she came to him, gathered her close.

"Someone," she rasped, speaking against his breast, "has been feeding me a contraceptive for a long time...before I began the new diet. There'll be problems with this birth because of it."

"But there are remedies?" he asked.

"Dangerous remedies. I know the source of that poison! I'll have her blood."

"My Sihaya," he whispered, holding her close to calm a sudden trembling. "You'll bear the heir we want. Isn't that enough?"

"My life burns faster," she said, pressing against him. "The birth now controls my life. The medics told me it goes at a terrible pace. I must eat and eat...and take more spice, as well...eat it, drink it. I'll kill her for this!"

Paul kissed her cheek. "No, my Sihaya. You'll kill no one." And he thought: *Irulan prolonged your life, beloved. For you, the time of birth is the time of death.*

HE felt hidden grief drain his marrow then, empty his life into a black flask.

Chani pushed away from him. "She cannot be forgiven!"

"Who said anything about forgiving?"

"Then why shouldn't I kill her?"

It was such a flat, Fremen question that Paul felt himself almost overcome by a hysterical desire to laugh. He covered it by saying: "It wouldn't help."

"You've seen that?"

Paul felt his belly tighten with vision-memory.

"What I've seen...what I've seen..." he muttered. Every aspect of surrounding events fitted a present which paralyzed him. He felt chained to a future which, exposed too often, had locked on to him like a greedy succubus. Tight dryness clogged his throat. Had he followed the witchcall of his own oracle, he wondered, until it had spilled him into a merciless present?

"Tell me what you've seen," Chani said.

"I can't."

"Why mustn't I kill her?"

"Because I ask it."

He watched her accept this. She did it the way sand accepted water, absorbing and concealing. Was there obedience beneath that hot, angry surface? He realized then that life in the royal Keep had left Chani unchanged. She'd merely stopped here for a time, inhabiting a way station on a journey with her man. Nothing of the desert had been taken from her.

Chani stepped away from him then and glanced at the ghola who stood waiting near the diamond circle of the practice floor.

"You've been crossing blades with him?" she asked.

"And I'm better for it."

Her gaze went to the circle on the floor, back to the ghola's metallic eyes.

"I don't like it," she said.

"He's not intended to do me violence," Paul said.

"You've seen that?"

"I've not seen it!"

"Then how do you know?"

"Because he's more than ghola; he's the Duncan Idaho."

"The Bene Tleilax made him."

"They made more than they intended."

She shook her head. A corner of her nezhoni scarf rubbed the collar of her robe. "How can you change the fact that he is ghola?"

"Hayt," Paul said, "are you the tool of my undoing?"

"If the substance of here and now is changed, the future is changed," the ghola said.

"That is no answer!" Chani objected.

Paul raised his voice: "How will I die, Hayt?"

Light glinted from the artificial eyes. "It is said, m'Lord, that you will die of money and power."

Chani stiffened. "How dare he speak thus to you?"

"The mentat is truthful," Paul said.

"Was Duncan Idaho a real friend?" she asked.

"He gave his life for me."

"It is sad," Chani whispered, "that a ghola cannot be restored to his original being."

"Would you convert me?" the ghola asked, directing his gaze to Chani.

"What does he mean?" Chani asked.

"To be converted is to be turned around," Paul said. "But there's no going back."

"Every man carries his own past with him," Hayt said.

"And every ghola?" Paul asked.

"In a way, m'Lord."

"Then what of that past in your secret flesh?" Paul asked.

CHANI saw how the question disturbed the ghola. His movements quickened, his hands clenched into fists. She glanced at Paul, wondering why he probed thus. Was there a way to restore this creature to the man he'd been?

"Has a ghola ever remembered his real past?" Chani asked.

"Many attempts have been made," Hayt said, his gaze fixed on the floor near his feet. "No ghola has ever been restored to his former being."

"But you long for this to happen," Paul said.

The blank surfaces of the ghola's eyes came up to center on Paul with a pressing intensity. "Yes!"

Sighing softly, Paul said: "If there's a way..."

"This flesh," Hayt said, touching left hand to forehead in a curious saluting movement, "is not the flesh of my original birth. It is...re-born. Only the shape is familiar. A Face Dancer might do as well."

"Not as well," Paul said. "And you're not a Face Dancer."

"That is true, m'Lord."

"Whence comes your shape?"

"The genetic imprint of the original cells."

"Somewhere," Paul slowly said, "there's a plastic something which remembers the shape of Duncan Idaho. It's said that the ancients probed our region before the Butlerian Jihad. What's the extent of this memory, Hayt? What did it learn from the original?"

The ghola shrugged.

"What if he wasn't Idaho?" Chani asked.

"He was."

"Can you be certain?"

"He is Duncan in every aspect. I cannot imagine a force strong enough to hold that shape thus without any relaxation or any deviation."

"M'Lord!" Hayt objected. "Because we cannot imagine a thing, that doesn't exclude it from reality. There are things I must do as a gholah that I would not do as a man."

Keeping his attention on Chani, Paul said: "You see?"

She nodded.

Paul turned away, fighting deep sadness. He crossed to the balcony windows and drew the draperies. Lights came on in the sudden gloom. He pulled the sash of his robe tight, listening for sounds behind him.

Nothing.

He turned. Chani stood as though entranced, her gaze centered on the gholah.

Hayt, Paul saw, had retreated to some inner chamber of his being—had gone back to the gholah place.

CHANI turned at the sound of Paul's return. She still felt the thralldom of the instant Paul had precipitated. For a brief moment, the gholah had been an intense, vital human being. For that moment, he had been someone she did not fear—indeed, someone she liked and admired. Now, she understood Paul's purpose in this probing. He had wanted her to

see the man in the gholah flesh.

She stared at Paul. "That man, was that Duncan Idaho?"

"That was Duncan Idaho. He is still there."

"Would *he* have allowed Irulan to go on living?" Chani asked.

The water didn't sink too deep, Paul thought. And he said: "If I commanded it."

"I don't understand," she said. "Shouldn't you be angry?"

"I am angry."

"You don't sound...angry. You sound sorrowful."

He closed his eyes. "Yes. That, too."

"You're my man," she said.

"I know this, but suddenly I don't understand you."

Abruptly, Paul felt that he walked down a long cavern. His flesh moved—one foot and then another—but his thoughts went elsewhere. "I don't understand myself," he whispered. When he opened his eyes, he found that he had moved away from Chani.

She spoke from somewhere behind him. "Beloved, I'll not ask again what you've *seen*. I only know I'm to give you the heir we want."

He nodded then. "I've known that from the beginning." He turned and studied her. Chani seemed very far away.

She drew herself up, placing a hand on her abdomen. "I'm hungry. The medics tell me I must eat three or four times what I ate before. I'm frightened, beloved. It goes too fast."

Too fast, he agreed. *This fetus knows the necessity for speed.*

XIV

The audacious nature of Muad'dib's actions may be seen in the fact that He knew from the beginning whither He was bound, yet not once did He step aside from that path. He put it clearly when He said: "I tell you that I come now to my time of testing when it will be shown that I am the Ultimate Servant." Thus He weaves all into One, that both friend and foe may worship Him. It is for this reason and this reason only that His Apostles prayed: "Lord, save us from the other paths which Muad'dib covered with the Waters of His Life." Those "other paths" may be imagined only with the deepest revulsion.

—from the Yiam-el-Din
(Book of Judgment)

THE messenger was a young woman—her face, name and family known to Chani—which was how she'd penetrated Imperial Security.

Chani had done no more than identify her for a Security Officer named Bannerjee, who then arranged the meeting with Muad'dib. Bannerjee acted out of instinct and the assurance that the young woman's father had been a member of the Emperor's Death Commandos, the dreaded Fedaykin, in the days before the Jihad. Otherwise, he might have ignored her plea that her message was intended only for the ears of Muad'dib.

She was, of course, screened

and searched before the meeting in Paul's private office. Even so, Bannerjee accompanied her, hand on knife, other hand on her arm.

It was almost mid-day when they brought her into the room—an odd space, a mixture of desert-Fremen and Family-Aristocrat. Hiereg hangings lined three walls, delicate tapestries adorned with figures out of Fremen mythology. A view screen covered the fourth wall, a silver gray surface behind an oval desk whose top held only one object, a Fremen sandclock built into an orrery. The orrery, a suspensor mechanism from Ix, carried both moons of Arrakis in the classic Worm Trine aligned with the sun.

Paul, standing beside the desk, glanced at Bannerjee. The Security Officer was one of those who'd come up through the Fremen Constabulary, winning his place on brains and proven loyalty despite the smuggler ancestry attested by his name. He was a solid figure, almost fat. Wisps of black hair fell down over the dark, wet-appearing skin of his forehead like the crest of an exotic bird. His eyes were blue-blue and steady in a gaze which could look upon happiness or atrocity without change of expression. Both Chani and Stilgar trusted him. Paul knew that if he told Bannerjee to throttle the girl immediately, Bannerjee would do it.

"Sire, here is the messenger girl," Bannerjee said. "M'Lady Chani said she sent word to you."

"Yes." Paul nodded curtly.

Oddly, the girl didn't look at

him. Her attention remained on the orrery. She was dark-skinned, of medium height, her figure concealed beneath a robe whose rich wine fabric and simple cut spoke of wealth. Her blue-black hair was held in a narrow band of material which matched the robe. The robe concealed her hands. Paul suspected that the hands were tightly clasped. It would be in character. Everything about her would be in character—including the robe, a last piece of finery saved for such a moment.

Paul motioned Bannerjee aside. He hesitated before obeying. Now, the girl moved—one step forward. When she moved there was grace. Still, her eyes avoided him.

Paul cleared his throat.

NOW, the girl lifted her gaze, the whiteless eyes widening with just the right shade of awe. She had an odd little face with delicate chin, a sense of reserve in the way she held her small mouth. The eyes appeared abnormally large above slanted cheeks. There was a cheerless air about her, something which said she seldom smiled. The corners of her eyes even held a faint yellow misting which could have been from dust irritation or the tracery of *semuta*.

Everything was in character.

"You asked to see me," Paul said.

The moment of supreme test for this girl-shape had come. Scytale had put on the shape, the mannerisms, the sex, the voice—everything his abilities

could grasp and assume. But this was a female known to Muad'dib in the *sietch* days. She'd been a child, then, but she and Muad'dib shared common experiences. Certain areas of memory must be avoided delicately. It was the most exacting part Scytale had ever attempted.

"I am Otheym's Lichna of Berk al Dib."

The girl's voice came out small, but firm, giving name, father and pedigree.

Paul nodded. He saw how Chani had been fooled. The timber of voice, everything was reproduced with exactitude. Had it not been for his own Bene Gesserit training in voice and for the web of *dao* in which oracular vision enfolded him, this Face Dancer disguise might have gulled even him.

Training exposed certain discrepancies: the girl was older than her known years; too much control tuned the vocal chords; the set of neck and shoulders missed by a fraction the subtle hauteur of Fremmen poise. But there were niceties, too: the rich robe had been patched to betray actual status...and the features were beautifully exact. They spoke a certain sympathy of this face dancer for the role being played.

"Rest in my home, daughter of Otheym," Paul said in formal Fremmen greeting. "You are welcome as water after a draught."

The faintest of relaxations exposed the confidence this apparent acceptance had conveyed.

"I bring a message," she said.

"A man's messenger is as himself," Paul said.

Scytale breathed softly. It went well, but now came the crucial task; the Atreides must be guided onto that special path. He must lose his Fremen concubine in circumstances where no other shared the blame. The failure must belong only to the *omnipotent* Muad'dib. He had to be led into an ultimate realization of his failure and thence to acceptance of the Tleilaxu alternative.

"I am the smoke which banishes sleep in the night," Scytale said, employing a Fedaykin code phrase: *I bear bad tidings.*

PAUL fought to maintain calmness. He felt naked, his soul abandoned in a groping-time concealed from every vision. Powerful oracles hid this Face Dancer. Only the edges of these moments were known to Paul. He knew only what he could *not* do. He could not slay the Face Dancer. That would precipitate the future which must be avoided at all cost. Somehow, a way must be found to reach into the darkness and change the terrifying pattern.

"Give me your message," Paul said.

Bannerjee moved to place himself where he could watch the girl's face. She seemed to notice him for the first time and her gaze went to the knife handle beneath the Security officer's hand.

"The innocent do not believe in evil," she said, looking squarely at Bannerjee.

Ahhh, well done, Paul thought. It was what the real Lichna would have said. He felt a momentary pang for the real daughter of Otheym—dead now, a corpse in the sand. There was no time for such emotions, though. He scowled.

Bannerjee kept his attention on the girl.

"I was told to deliver my message in secret," she said.

"Why?" Bannerjee demanded, voice harsh, probing.

"Because it is my father's wish."

"This is my friend," Paul said. "Am I not a Fremen? Then my friend may hear anything I hear."

Scytale composed the girl-shape. Was this a true Fremen custom. . . or was it a test?

"The Emperor may make his own rules," Scytale said. "This is the message: My father wishes you to come to him, bringing Chani."

"Why must I bring Chani?"

"She is your woman and a Sayyadina. This is a Water matter, by the rules of our tribes. She must attest it that my father speaks according to the Fremen Way."

There truly are Fremen in the conspiracy, Paul thought. This moment fitted the shape of things to come for sure. And he had no alternative but to commit himself to this course.

"Of what will your father speak?" Paul asked.

"He will speak of a plot against you—a plot among the Fremmen."

"Why doesn't he bring that message in person?" Bannerjee demanded.

She kept her gaze on Paul. "My father cannot come here. The plotters suspect him. He'd not survive the journey."

"Could he not divulge the plot to you?" Bannerjee asked. "How came he to risk his daughter on such a mission?"

"The details are locked in a distrans carrier that only Maud'dib may open," she said. "This much I know."

"Why not send the distrans, then?" Paul asked.

"It is a human distrans," she said.

"I'll go, then," Paul said. "But I'll go alone."

"Chani must come with you!"

"Chani is with child."

"When has a Fremmen woman refused to..."

"My enemies fed her a subtle poison," Paul said. "It will be a difficult birth. Her health will not permit her to accompany me now."

BEFORE Scytale could still them, strange emotions passed over the girl-features—frustration, then anger. Scytale was reminded that every victim must have a way of escape—even such a one as Muad'dib. The conspiracy had not failed, though. This Atreides remained in the net. He was a creature who had developed firmly into one pattern. He'd

destroy himself before changing into the opposite of that pattern. That had been the way with the Tleilaxu kwisatz haderach. It would be the way with this one. And then...the ghola.

"Let me ask Chani to decide this," she said.

"I have decided it," Paul said. "You will accompany me in Chani's stead."

"It requires a Sayyadina of the Rite!"

"Are you not Chani's friend?"

Boxed! Scytale thought. *Does he suspect? No. He's being Fremmen-cautious. And the contraceptive is a fact. Well—there are other ways.*

"My father told me I was not to return," Scytale said, "that I was to seek asylum with you. He said you'd not risk me."

Paul nodded. It was beautifully in character. He couldn't deny this asylum. She'd plead Fremmen obedience to a father's command.

"I'll take Stilgar's wife, Harah," Paul said. "You'll tell us the way to your father."

"How do you know you can trust Stilgar's wife?"

"I know it."

"But I don't."

Paul pursed his lips. "Does your mother live?"

"My true mother has gone to Shai-hulud. My second mother still lives and cares for my father. Why?"

"She's of Sietch Tabr?"

"Yes."

"I remember her," Paul said. "She will serve in Chani's place." He motioned to Bannerjee. "Have

attendants take Otheym's Lichna to suitable quarters."

Bannerjee nodded. *Attendants*. The key word meant that this messenger must be put under special guard. He took her arm. She resisted.

"How will you go to my father?" she pleaded.

"You'll describe the way to Bannerjee," Paul said. "He is my friend."

"No! My father had commanded it! I cannot!"

"Bannerjee?" Paul said.

Bannerjee paused. Paul saw the man searching that encyclopedic memory which had helped bring him to his position of trust. "I know a guide who can take you to Otheym," Bannerjee said.

"Then I'll go alone," Paul said.

"Sire, if you. . ."

"Otheym wants it this way," Paul said, barely concealing the irony which consumed him.

"Sire, it's too dangerous," Bannerjee protested.

"Even an Emperor must accept some risks," Paul said. "The decision is made. Do as I've commanded."

Reluctantly, Bannerjee led the face dancer from the room.

Paul turned toward the blank screen behind his desk. He felt that he waited for the arrival of a rock on its blind journey from some height.

Should he tell Bannerjee about the messenger's true nature? No! Such an incident hadn't been written on the screen of his vision. Any deviation here carried precipitate violence. A moment of

fulcrum had to be found, a place where he could will himself out of the vision.

If such a moment existed. . .

XV

No matter how exotic human civilization becomes, no matter the developments of life and society nor the complexity of the machine/human interface, there always come interludes of lonely power when the course of humankind, the very future of humankind, depends upon the relatively simple actions of single individuals.

—from The Tleilaxu Godbuk

AS HE crossed over on the high footbridge from his Keep to the Qizarate Office Building, Paul added a limp to his walk. It was almost sunset and he walked through long shadows that helped conceal him, but sharp eyes still might detect something in his carriage that identified him. He wore a shield, but it was not activated, his aides having decided that the shimmer of it might arouse suspicions.

Paul glanced left. Strings of sandclouds lay across the sunset like slatted shutters. The air was hierog dry through his stillsuit filters.

He wasn't really alone out here, but the web of Security hadn't been this loose around him since he'd ceased walking the streets alone in the night. Ornithopters with night scanners drifted far

overhead in seemingly random pattern, all of them tied to his movements through a transmitter concealed in his clothing. Picked men walked the street below. Others had fanned out through the city after seeing the Emperor in his disguise—Fremen costume down to the stillsuit and *temag* desert boots, the darkened features. His cheeks had been distorted with plastene inserts. A catchtube ran down along his left jaw.

As he reached the opposite end of the bridge, Paul glanced back, noting a movement beside the stone lattice that concealed a balcony of his private quarters. Chani, no doubt. "Hunting for sand in the desert," she'd called this venture.

How little she understood the bitter choice. Selecting among agonies, he thought, made even lesser agonies near unbearable.

For a blurred, emotionally painful moment, he relived their parting. At the last instant, Chani had experienced a tau-glimpse of his feelings, but she had misinterpreted. She had thought his emotions were those experienced in the parting of loved ones when one entered the dangerous unknown.

Would that I did not know, he thought.

He had crossed the bridge now and entered the upper passageway through the office building. There were fixed glowglobes here and people hurrying on business. The Qizarate never slept. Paul found his attention caught by the signs

above doorways, as though he were seeing them for the first time: *Speed Merchants. Wind Stills and Retorts. Prophetic Prospects. Tests and Trials of Faith. Religious Supply. Weaponry. . . Propagation of the Faith. . .*

A more honest label would have been *Propagation of the Bureaucracy*, he thought.

ATYPE of religious civil servant had sprung up all through his universe. This new man of the Qizarate was more often a convert. He seldom displaced a Fremen in the key posts, but he was filling all the interstices. He used melange as much to show he could afford it as for the geriatric benefits. He stood apart from his rulers—Emperor, Guild, Bene Gesserit, Landsraad, Family or Qizarate. His gods were Routine and Records. He was served by mentats and prodigious filing systems. Expediency was the first word in his catechism, although he gave proper lip service to the precepts of the Butlerians. Machines could not be fashioned in the image of a man's mind, he said, but he betrayed by every action that he preferred machines to men, statistics to individuals, the far away general view to the intimate personal touch requiring imagination and initiative.

As Paul emerged onto the ramp at the far side of the building, he heard the bells calling the Evening Rite at Alia's Fane.

The temple across the thronged square was new, its rituals of recent devising, but there was

something about this setting in a desert sink at the edge of Arrakeen—something in the way wind-driven sand had begun to weather stones and plastene, something in the haphazard way buildings had gone up around the fane. Everything conspired to produce the impression that this was a very old place full of traditions and mystery.

He was down into the press of people now—committed. The only guide his Security force could find had insisted it be done this way. Security hadn't liked Paul's ready agreement. Stilgar had liked it even less. And Chani had objected most of all.

The crowd around him, even while its members brushed against him, glanced his way unseeing and passed on, gave him a curious freedom of movement. It was the way they'd been conditioned to treat a Fremien, he knew. He carried himself like a man of the inner desert. Such men were quick to anger.

As he moved into the quickening flow to the temple steps, the crush of people became even greater. Those all around could not help but press against him now, but he found himself the target for ritual apologies: "Your pardon, noble sir. I cannot prevent this discourtesy." "Pardon, sir; this crush of people is the worst I've ever seen." "I abase myself, holy citizen. A lout shoved me."

Paul ignored the words after the first few. There was no feeling in them except a kind of ritual

fear. He found himself, instead, thinking that he had come a long way from his boyhood days in Caladan Castle. Where had he put his foot on the path that led to this journey across a crowded square on a planet so far from Caladan? Had he really put his foot on a path? He could not say he had acted at any point in his life for one specific reason. The motives and impinging forces had been complex—more complex possibly than any other set of goads in human history. He had the heady feeling here that he might still avoid the fate he could see so clearly along this path. But the crowd pushed him forward and he experienced the dizzy sense that he had lost his way, lost personal direction over his life.

The crowd flowed with him up the steps now into the temple portico. Voices grew hushed. The smell of fear grew stronger—acid, sweaty.

ACOLYTES had already begun the service within the temple. Their plain chant dominated the other sounds—whispers, rustle of garments, shuffling of restless feet, coughs—telling the story of the Far Places visited by the Priestess in her holy trance.

She rides the sandworm of space!

She guides through all storms
Into the land of gentle winds.

Though we sleep by the snake's den,

She guards our dreaming souls.
Shunning the desert heat,
She hides us in a cool hollow.
The gleaming of her white teeth
Guides us in the night.
By the braids of her hair
We are lifted up to heaven!
Sweet fragrance, flower-scented
Surrounds us in her presence.

Balak! Paul thought, thinking in Fremen. *Look out! She can be filled with angry passion, too.*

The temple portico was lined with tall, slender glowtubes simulating candle flame. They flickered. The flickering stirred ancestral memories in Paul even while he knew that was the intent. This setting was an atavism, subtly contrived, effective. He hated his own hand in it.

The crowd flowed with him through tall metal doors into the gigantic nave, a gloomy place with the flickering lights far away overhead, a brilliantly illuminated altar at the far end. Behind the altar, a deceptively simple affair of black wood encrusted with sand patterns from the Fremen mythology, hidden lights played on the field of a pru-door to create a rainbow borealis. The seven rows of chanting acolytes ranged below that spectral curtain suddenly took on a stark, eerie quality—black robes, white faces, mouths moving in unison.

Paul studied the pilgrims around him, suddenly envious of their intentness, their air of listening to truths he could not hear. It seemed to him that they gained something here which was denied

to him, something mysteriously healing.

He tried to inch his way closer to the altar and was stopped by a hand on his arm. Paul whipped his gaze around to meet the probing stare of an ancient Fremen—blue-blue eyes beneath overhanging brows, recognition in them. A name flashed into Paul's mind: Rasir, a companion from the sietch days.

In the press of the crowd, Paul knew he would be completely vulnerable if Rasir planned violence.

The old man pressed close, one hand beneath a sand-grimed robe—grasping the hilt of a crysknife, no doubt. Paul set himself as best he could to resist attack. The old man moved his head toward Paul's ear and whispered: "We will go with the others."

It was the signal to identify his guide. Paul nodded.

Rasir drew back and faced the altar.

"She comes from the east," the acolytes chanted. "The sun stands at her back. All things are exposed. The full glare of light—her eyes miss no thing, neither light nor dark."

A wailing rebaba jarred across the voices, stilled them and receded into silence. With an electric abruptness, the crowd surged forward several meters. They were packed into a tight mass of flesh now, the air heavy with their breathing and the scent of spice.

"Shai-hulud writes on clean

sand!" the pale acolytes shouted.

PAUL felt his own breath catch in unison with those around him. A feminine chorus began singing faintly from the shadows behind the shimmering prudoor: "Alia...Alia..." It grew louder and louder, fell to sudden silence.

Again—voices beginning vesper soft:

She stills all storms—
Her eyes kill our enemies,
And torment the unbelievers.
From the spires of Tuono
Where dawnlight strikes
And clear water runs,
You see her shadow.
In the shining summer heat
She serves us bread and milk—
Cool, fragrant with spices.
Her eyes melt our enemies,
Torment our oppressors
And pierce all mysteries.
She is Alia...Alia...Alia...

Slowly, the voices trailed off.

Paul felt sickened. *What are we doing?* he asked himself. Alia was a child witch, but she was growing older. And he thought: *Growing older is to grow more wicked.*

The collective mental atmosphere of the temple ate at his psyche. He could sense that element of himself which was one with those all around him, but the differences formed a deadly contradiction. He stood immersed, isolated in a personal sin which he could never expiate. The immensity of the universe outside the temple flooded his awareness.

DUNE MESSIAH

How could one man, one ritual, hope to knit such immensity into a garment fitted to all men?

The universe opposed him at every step. It eluded his grasp, conceived countless disguises to delude him. That universe would never agree with any shape he gave it.

A profound hush spread through the temple.

Alia emerged from the darkness behind the shimmering rainbows. She wore a yellow robe trimmed in Atreides green—yellow for sunlight, green for the death which produced life. Paul experienced the sudden surprising thought that Alia had emerged here just for him, for him alone. He stared across the mob in the temple at his sister. She was his sister. He knew her ritual and its roots, but he had never before stood out here with the pilgrims or watched her through their eyes. Here, performing the mystery of this place, he saw that she partook of the universe which opposed him.

Acolytes brought her a golden chalice.

Alia raised the chalice.

With part of his awareness, Paul knew that the chalice contained the unaltered melange, the subtle poison, her sacrament of the oracle.

Her gaze on the chalice, Alia spoke. Her voice caressed the ears flower sound, flowing and musical:

"In the beginning, we were empty," she said.

"Ignorant of all things," the chorus sang.

"We did not know the Power that abides in every place," Alia said.

"And in every Time," the chorus sang.

"Here is the Power," Alia said, raising the chalice slightly.

"It brings us joy," sang the chorus.

And it brings us distress, Paul thought.

"It awakens the soul," Alia said.

"It dispels all doubts," the chorus sang.

"In worlds, we perish," Alia said.

"In the Power, we survive," sang the chorus.

Alia put the chalice to her lips. She drank.

TO HIS astonishment, Paul found he was holding his breath like the meanest pilgrim of this mob. Despite every shred of personal knowledge about the experience Alia was undergoing, he had been caught in the tao-web. He felt himself remembering how that fiery poison coursed into the body. Memory unfolded the time-stopping when awareness became a mote which changed the poison. He re-experienced the awakening into timelessness where all things were possible. He *knew* Alia's present experience, yet he saw now that he did not know it. Mystery blinded the eyes.

Alia trembled and sank to her knees.

Paul exhaled with the enraptured pilgrims. He nodded. Part of the veil began to lift from him.

Absorbed in the bliss of a vision, he had forgotten that each vision belonged to all those who were still on-the-way, still to become. In the vision, one passed through a darkness, unable to distinguish reality from insubstantial accident. One hungered for absolutes which could never be.

Hungering, one lost the present. Alia swayed with the rapture of spice change.

Paul felt that some transcendental presence spoke to him, saying: "Look! See there! See what you've ignored?" In that instant, he thought he looked through other eyes, that he saw an imagery and rhythm in this place which no artist or poet could reproduce. It was vital and beautiful, a glaring light that exposed all power-gluttony...even his own.

Alia spoke. Her amplified voice boomed across the nave.

"Luminous night," she cried.

A moan swept like a wave through the crush of pilgrims.

"Nothing hides in such a night!" Alia said. "What rare light is this darkness? You cannot fix your gaze upon it! Senses cannot record it. No words describe it." Her voice lowered. "The abyss remains. It is pregnant with all the things yet to be. Ahhhhh, what gentle violence!"

Paul felt that he waited for some private signal from his sister. It could be any action or word, something of wizardry and mystical processes, an outward streaming that would fit him like an arrow into a cosmic bow.

"There will be sadness," Alia intoned. "I remind you that all things are but a beginning, forever beginning. Worlds wait to be conquered. Some within the sound of my voice will attain exalted destinies. You will sneer at the past, forgetting what I tell you now: within all differences there is unity."

Paul suppressed a cry of disappointment as Alia lowered her head. She had not said the thing he waited to hear. His body felt like a dry shell, a husk abandoned by some desert insect.

Others must feel something similar, he thought. He sensed the restlessness about him. Abruptly, a woman in the mob, someone far down in the nave to Paul's left, cried out, a wordless noise of anguish.

ALIA lifted her head and Paul had the giddy sensation that the distance between them collapsed, that he stared directly into her glazed eyes only inches away from him.

"Who summons me?" Alia asked.

"I do," the woman cried. "I do. Alia. Oh, Alia, help me. They say my son was killed on Muritan. Is he gone? Will I never see my son again. . . never?"

"You try to walk backward in the sand," Alia intoned. "Nothing is lost. Everything returns later, but you may not recognize the changed form that returns."

"Alia, I don't understand!" the woman wailed.

"You live in the air but you

do not see it," Alia said, sharpness in her voice. "Are you a lizard? Your voice has the Fremmen accent. Does a Fremmen try to bring back the dead? What do we need from our dead except their water?"

Down in the center of the nave, a man in a rich red cloak lifted both hands, the sleeves falling to expose white-clad arms. "Alia," he shouted, "I have had a business proposal. Should I accept?"

"You come here like a begger," Alia said. "You look for the golden bowl but you will find only a dagger."

"I have been asked to kill a man!" a voice shouted from off to the right—a deep voice with sictch tones. "Should I accept? Accepting, would I succeed?"

"Beginning and end are a single thing," Alia snapped. "Have I not told you this before? You didn't come here to ask that question. What is it you cannot believe that you must come here and cry out against it?"

"She's in a fierce mood tonight," a woman near Paul muttered. "Have you ever seen her this angry?"

She knows I'm out here, Paul thought. *Did she see something in the vision that angered her? Is she raging at me?*

"Alia," a man directly in front of Paul called. "Tell these businessmen and faint hearts how long your brother will rule!"

"I permit you to look around that corner by yourself," Alia snarled. "You carry your prejudice in your mouth! It is because

my brother rides the worm of chaos that you have roof and water!"

With a fierce gesture, clutching her robe, Alia whirled away, strode through the shimmering ribbons of light and was lost in the darkness behind.

Immediately, the acolytes took up the closing chant, but their rhythm was off. Obviously, they'd been caught by the unexpected ending of the rite. An incoherent mumbling arose on all sides of the crowd. Paul felt the stirring around him—restless, dissatisfied.

"It was that fool with his stupid question about business," a woman near Paul muttered. "The hypocrite!"

What had Alia seen? What track through the future?

Something had happened here tonight, souring the rite of the oracle. Usually, the crowd clamored for Alia to answer their pitiful questions. They came as beggars to the oracle, yes. He had heard them thus many times as he'd watched, hidden in the darkness behind the altar. What had been different about this night?

The old Fremen tugged Paul's sleeve and nodded toward the exit. The crowd already was beginning to push in that direction. Paul allowed himself to be pressed along with them, the guide's hand upon his sleeve. There was the feeling in him then that his body had become the manifestation of some power he could no longer control. He had become a non-being, a stillness which moved

itself. At the core of the non-being, there he existed, allowing himself to be led through the streets of his city, following a track so familiar to his visions that it froze his heart with grief.

I should know what Alia saw, he thought. I have seen it enough times myself. And she didn't cry out against it. . . she saw the alternatives, too.

XVI

Production growth and income growth must not get out of step in my Empire. That is the substance of my command. There are to be no balance-of-payment difficulties between the different spheres of influence. And the reason for this is simply because I command it. I want to emphasize my authority in this area. I am the supreme energy-eater of this domain, and will remain so alive or dead. My Government is the economy.

—Order In Council

The Emperor Paul Muad'dib

"I WILL leave you here," the old man said, taking his hand from Paul's sleeve. "It is on the right, second door from the far end. Go with Shai-hulud, Muad'dib. . . and remember when you were Usul."

Paul's guide slipped away into the darkness.

There would be Security men somewhere out there waiting to grab the guide and take the man to a place of questioning, Paul knew. But Paul found himself

hoping the old Fremmen would escape.

There were stars overhead and the distant light of First Moon somewhere beyond the Shield Wall. But this place was not the open desert where a man could sight on a star to guide his course. The old man had brought him into one of the new suburbs; that much Paul recognized.

This street now was thick with sand blown in from encroaching dunes. A dim light glowed from a single public suspensor globe far down the street. It gave enough illumination to show that this was a dead end street.

The air around him was thick with the smell of a reclamation still. The thing must be poorly capped for its fetid odors to escape, loosing a dangerously wasteful amount of moisture into the night air. How careless his people had grown, Paul thought. They were millionaires of water—forgetful of the days when a man on Arrakis could have been killed for just an eighth share of the water in his body.

Why am I hesitating? Paul wondered. *It is the second door from the far end. I knew that without being told. But this thing must be played out with precision. So... I hesitate.*

The noise of an argument arose suddenly from the corner house on Paul's left. A woman there berated someone; the new wing of their house leaked dust, she complained. Did he think water fell from heaven? If dust came in, moisture got out.

Some remember, Paul thought.

He moved down the street and the quarrel faded away behind.

Water from heaven! he thought.

Some Fremmen had seen that wonder on other worlds. He had seen it himself, had ordered it for Arrakis; but the memory of it felt like something that had occurred to another person. Rain, it was called. Abruptly, he remembered a rainstorm on his birthworld—clouds thick and gray in the sky of Caladan, an electric storm presence, moist air, the big wet drops drumming on skylights. It ran in rivulets off the eaves. Storm drains took the water away to a river which ran muddy and turgid past the broad family orchards... trees there with their barren branches glistening wetly.

PAUL'S foot caught in a low drift of sand across the street. For an instant, he felt mud clinging to the shoes of his childhood. Then he was back in the sand, in the dust-clotted, wind-muffled darkness with the Future hanging over him, taunting. He could feel the aridity of life around him like an accusation. *You did this!* They'd become a civilization of dry-eyed watchers and tale-tellers, people who solved all problems with power, power and more power—hating every erg of it.

Rough stones came underfoot. His vision remembered them. The dark rectangle of a doorway appeared on his right—black in black—Otheym's house, Fate's house, a place different from the ones around it only in the role

Time had chosen for it. It was a strange place to be marked down in history.

The door opened to his knock. The gap revealed the dull green light of an atrium. A dwarf peered out, ancient face on a child's body, an apparition prescience had never seen.

"You've come then," the apparition said. The dwarf stepped aside, no awe in his manner, merely the gloating of a slow smile. "Come in! Come in."

Paul hesitated. There'd been no dwarf in the vision, but all else remained identical. Visions could contain such disparities and still hold true to their original plunge into infinity. But the difference dared him to hope. He glanced back up the street at the creamy pearl glistening of his moon swimming out of jagged shadows. The moon haunted him. How did it fall?

"Come in," the dwarf insisted.

Paul entered. He heard the door thud into its moisture seals behind. The dwarf passed him, led the way, enormous feet slapping the floor, and opened the delicate lattice gate into the roofed central courtyard. He gestured. "They await, Sire."

Sire, Paul thought. *He knows me, then.*

Before Paul could explore this discovery, the dwarf slipped away down a side passage. Hope was a dervish wind whirling, dancing in Paul. He headed across the courtyard. It was a dark and gloomy place, the smell of sickness and defeat in it. He felt

daunted by the atmosphere. Was it defeat to choose a lesser evil? How far down this track had he come?

Light poured from a narrow doorway in the far wall. He put down the feeling of watchers and evil smells and entered the doorway into a small room. It was a barren place by Fremen standards with heireg hangings on only two walls. Opposite the door, a man sat on carmine cushions beneath the best hanging. A feminine figure hovered in shadows behind another doorway in a barren wall to the left.

Paul felt vision-trapped. This was the way it had gone. Where was the dwarf? Where was the difference?

HIS senses absorbed the room in a single gestalten sweep. The place had received painstaking care despite its poor furnishings. Hooks and rods across the barren walls showed where hangings had been removed. Pilgrims paid enormous prices for authentic Fremen artifacts, Paul reminded himself. Rich pilgrims counted desert tapestries as treasures, true marks of a *hajj*.

Paul felt that the barren walls accused him with their fresh gypsum wash. The threadbare condition of the two remaining hangings amplified the sense of guilt.

A narrow shelf occupied the wall on his right. It held a row of portraits—mostly bearded Fremen, some in stillsuits with their

catchtubes dangling, some in Imperial uniforms posed against exotic offworld backgrounds. The most common scene was a seascape.

The Fremen on the cushions cleared his throat, forcing Paul to look at him. It was Otheym precisely as the vision had revealed him—neck grown scrawny, a bird thing which appeared too weak to support the large head. The face was a lopsided ruin—networks of crisscrossed scars on the left cheek below a drooping, wet eye, but clear skin on the other side and a straight, blue-in-blue Fremen gaze. A long kedge of a nose bisected the face.

Otheym's cushions sat in the center of a threadbare rug, brown with maroon and gold threads. The cushion fabric betrayed splotches of wear and patching, but every bit of metal around the seated figure shone from polishing—the portrait frames, shelf lip and brackets, the pedestal of a low table on the right.

Paul nodded to the clear half of Otheym's face. "Good luck to you and your dwelling place." It was the greeting of an old friend and sietch-mate.

"So I see you once more, Usul."

The voice speaking his tribal name whined with an old man's quavering. The dull drooping eye on the ruined side of the face moved above the parchment skin and scars. Gray bristles stubbled that side and the jawline there hung with scabrous peelings.

DUNE MESSIAH

Otheym's mouth twisted as he spoke, the gap exposing silvery metal teeth.

"Muad'dib always answers the call of a Fedaykin," Paul said.

The woman in the doorway shadows moved. She said: "So Stilgar boasts."

She came forward into the light, an older version of the Lichna that the Face Dancer had copied. Paul recalled then that Otheym had married sisters. Her hair was gray, her nose grown witch sharp. Weaver's callouses ran along her forefingers and thumbs. A Fremen woman would have displayed such marks proudly in the sietch days, but she saw his attention on her hands and hid them under a fold of her pale blue robe.

Paul remembered her name then—Dhuri. The shock was that he remembered her as a child, not as she'd been in his vision of these moments. It was the whine that edged her voice, Paul told himself. She'd whined even as a child.

"You see me here," Paul said. "Would I be here if Stilgar hadn't approved?" He turned toward Otheym. "I carry your water burden, Otheym. Command me."

This was the straight Fremen talk of sietch brothers.

OTHEYM produced a shaky nod, almost too much for that thin neck. He lifted a liver-marked left hand and pointed to the ruin of his face. "I caught the splitting disease on Tarahell, Usul," he wheezed. "Right after the victory

when we'd all..." A fit of coughing stopped his voice.

"The tribe will collect his water soon," Dhuri said. She crossed to Otheym, propped pillows behind him and held his shoulder to steady him until the coughing passed. She wasn't really very old, Paul saw, but a look of lost hopes ringed her mouth and bitterness lay in her eyes.

"I'll summon doctors," Paul said.

Dhuri turned, hand on hip. "We've had medical men, as good as any you could summon." She sent an involuntary glance to the barren wall on her left.

And the medical men were costly, Paul thought.

He felt edgy, constrained by the vision but aware that minor differences had crept in. How could he exploit the differences? Time came out of its skein with subtle changes, but the background fabric held oppressive sameness. He knew with terrifying certainty that if he tried to break out of the enclosing pattern here, it would become a thing of terrible violence. The power in this deceptively gentle flow of Time oppressed him.

"Say what you want of me," he growled.

"Couldn't it be that Otheym needed a friend to stand by him in this time?" Dhuri asked. "Does a Fedaykin have to consign his flesh to strangers?"

We shared Sietch Tabr, Paul reminded himself. *She has the right to berate me for apparent callousness.*

"What I can do I will do," Paul said.

Another fit of coughing shook Otheym. When it had passed, he gasped: "There's treachery, Usul. Fremen plot against you." His mouth worked then without sound. Spittle escaped his lips. Dhuri wiped his mouth with a corner of her robe, and Paul saw how her face betrayed anger at such waste of moisture.

Frustrated rage threatened to overwhelm Paul then. *That Otheym should be spent thus! A Fedaykin deserved better.* But no choice remained—not for a Death Commando or his Emperor. They walked Ockham's razor in this room. The slightest misstep multiplied horrors—not just for themselves, but for all humankind, even for those who would destroy them.

Paul squeezed calmness into his mind. He looked at Dhuri. The expression of terrible longing with which she gazed at Otheym strengthened Paul. *Chani must never look at me that way,* he told himself.

"Lichna spoke of a message," Paul said.

"My dwarf," Otheym wheezed. "I bought him on...on...on a world...I forget. He's a human distrans, a toy discarded by the Tleilaxu. He's recorded all the names...the traitors..."

Otheym fell silent, trembling.

"You speak of Lichna," Dhuri said. "When you arrived, we knew she'd reached you safely. If you're thinking of this new burden Otheym places upon you, Lichna

is the sum of that burden. An even exchange, Usul. Take the dwarf and go."

Paul suppressed a shudder. He closed his eyes. *Lichna!* The real daughter had perished in the desert, a *semuta*-wracked body abandoned to the sand and the wind.

Opening his eyes, Paul said: "You could have come to me at any time for. . ."

"Otheym stayed away that he might be numbered among those who hate you, Usul," Dhuri said. "The house to the south of us at the end of the street, that is a gathering place for your foes. It's why we took this hovel."

"Then summon the dwarf and we'll leave," Paul said.

"You've not listened well," Dhuri said.

"You must take the dwarf to a safe place," Otheym said, an odd strength in his voice. "He carries the only record of the traitors. No one suspects his talent. They think I keep him for amusement."

"We cannot leave," Dhuri said. "Only you and the dwarf. It's known. . .how poor we are. We've said we're selling the dwarf. They'll take you for the buyer. It's your only chance."

PAUL consulted his memory of the vision: in it, he'd left here with the names of the traitors, but never seeing how those names were carried. The dwarf obviously moved under the protection of another oracle. It occurred to Paul then that all creatures must carry

some kind of destiny stamped out by purposes of varying strengths, by the fixatives of training and disposition. From the moment the Jihad had chosen him, he'd felt himself hemmed in by the forces of a multitude. Their fixed purposes demanded and controlled his course. Any delusions of Free Will he harbored now must be merely the prisoner rattling his cage. His curse lay in the fact that he *saw* the cage. He *saw* it!

He listened now to the emptiness of this house. There were only the four of them in it—Dhuri, Otheym, the dwarf and himself. He inhaled the fear and tension of his companions, sensed the watchers—his own force hovering in 'thopters.

I was wrong to hope, Paul thought. But thinking of hope brought him a twisted *sense* of hope, and he felt that he might yet seize his moment.

"Summon the dwarf," he said.

"Bijaz!" Dhuri called.

"You call me?" The dwarf stepped into the room from the courtyard, an alert expression of worry on his face.

"You have a new master, Bijaz," Dhuri said. She stared at Paul. "You may call him. . .Usul."

"Usul, that's the base of the pillar," Bijaz said, translating. "How can Usul be base when I'm the basest thing living?"

"He always speaks thus," Otheym apologized.

"I don't speak," Bijaz said. "I operate a machine called language. It creaks and groans."

A Tleilaxu toy, learned and alert, Paul thought. *The Bene Tleilax never threw away something this valuable.* He turned and studied the dwarf. Round melange eyes returned his stare.

"What other talents have you, Bijaz?" Paul asked.

"I know when we should leave," Bijaz said. "It's a talent few men have. There's a time for endings—and that's a good beginning. Let us begin to go, Usul."

Paul examined his vision memory—no dwarf, but the little man's words fitted the occasion.

"At the door, you called me Sire," Paul said. "You know me, then?"

"You've sired, Sire," Bijaz said, grinning. "You are much more than the base Usul. You're the Atreides Emperor, Paul Muad'dib. And you are my finger." He held up the index finger of his right hand.

"Bijaz!" Dhuri snapped. "You tempt fate."

"I tempt my finger," Bijaz protested, voice squeaking. He pointed at Usul. "I point at Usul. Is my finger not Usul himself? Or is it a reflection of something more base?" He brought the finger close to his eyes, examined it with a mocking grin, first one side then the other. "Ahhh, it's merely a finger, after all."

"He often rattles on thus," Dhuri said, worry in her voice. "I think it's why he was discarded by the Tleilaxu."

"I'll not be patronized," Bijaz said, "yet I have a new patron.

How strange the workings of the finger." He peered at Dhuri and Otheym, eyes oddly bright. "A weak glue bound us, Otheym. A few tears and we part." The dwarf's big feet rasped on the floor as he whirled completely around and stopped facing Paul. "Ahhh, patron! I came the long way around to find you."

Paul nodded.

"**Y**OU'LL be kind, Usul?" Bijaz asked. "I'm a person, you know. Persons come in many shapes and sizes. This be but one of them. I'm weak of muscle, but strong of mouth; cheap to feed, but costly to fill. Empty me as you will, there's still more in me than men put there."

"We've no time for your stupid riddles," Dhuri growled. "You should be gone."

"I'm riddled with conundrums," Bijaz said, "but not all of them stupid. To be gone, Usul, is to be a bygone. Yes? Let us let bygones be bygones. Dhuri speaks truth, and I've the talent for hearing that, too."

"You've truthsense?" Paul asked, determined now to wait out the clockwork of his vision. Anything was better than shattering these moments and producing the new consequences. There remained things for Otheym to say lest Time be diverted into even more horrifying channels.

"I've *now*-sense," Bijaz said.

Paul noted that the dwarf had grown more nervous. Was the little man aware of things about

to happen? Could Bijaz be his own oracle?

"Did you inquire of Lichna?" Otheym asked suddenly, peering up at Dhuri with his good eye.

"Lichna is safe," Dhuri said.

Paul lowered his head, lest his expression betray the lie. *Safe!* Lichna was ashes in a secret grave.

"That's good then," Otheym said, taking Paul's lowered head for a nod of agreement. "One good thing among the evils, Usul. I don't like the world we're making, you know that? It was better when we were alone in the desert with only the Harkonnens for enemy."

"There's but a thin line between many an enemy and many a friend," Bijaz said. "Where that line stops, there's no beginning and no end. Let's end it, my friends." He moved to Paul's side, jittered from one foot to the other.

"What's *now*-sense?" Paul asked, dragging out these moments, goading the dwarf.

"Now!" Bijaz said, trembling. "Now! Now!" He tugged at Paul's robe. "Let us go now!"

"His mouth rattles, but there's no harm in him," Otheym said, affection in his voice, the one good eye staring at Bijaz.

"Even a rattle can signal departure," Bijaz said. "And so can tears. Let's be gone while there's time to begin."

"Bijaz, what do you fear?" Paul asked.

"I fear the spirit seeking me now," Bijaz muttered. Perspiration stood out on his forehead.

His cheeks twitched. "I fear the one who thinks not and will have no body except mine—and that one gone back into itself! I fear the things I see and the things I do not see."

This dwarf does possess the power of prescience, Paul thought. Bijaz shared the terrifying oracle. Did he share the oracle's fate, as well? How potent was the dwarf's power? Did he have the little prescience of those who dabbled in the Dune Tarot? Or was it something greater? How much had he seen?

"Best you go," Dhuri said. "Bijaz is right."

"Every minute we linger," Bijaz said, "prolongs. . .prolongs the present!"

Every minute I linger defers my guilt, Paul thought. A worm's poisonous breath, its teeth dripping dust, had washed over him. It had happened long ago, but he inhaled the memory of it now—spice and bitterness. He could sense his own worm waiting—"the urn of the desert."

"These are troubled times," he said, addressing himself to Otheym's judgment of their world.

"Fremen know what to do in time of trouble," Dhuri said.

Otheym contributed a shaky nod.

Paul glanced at Dhuri. He'd not expected gratitude, would have been burdened by it more than he could bear, but Otheym's bitterness and the passionate resentment he saw in Dhuri's eyes shook his resolve. Was *anything* worth this price?

"Delay serves no purpose," Dhuri said.

"Do what you must, Usul," Otheym wheezed.

Paul sighed. The words of the vision had been spoken. "There'll be an accounting," he said, to complete it. Turning, he strode from the room. He heard Bijaz foot-slapping behind.

"Bygones, bygones," Bijaz muttered as they went. "Let bygones fall where they may. This has been a dirty day."

FIRST Moon stood high over the city as Paul, his shield activated and shimmering around him, emerged from the cul-de-sac. A wind off the massif whirled hot dust down the narrow street, causing Bijaz to blink and shield his eyes.

"We must hurry," the dwarf muttered. "Hurry! Hurry!"

"You sense danger?" Paul asked, probing.

"I *know* danger!"

An abrupt sense of peril very near was followed almost immediately by a figure joining them out of a doorway.

Bijaz crouched and whimpered.

It was only Stilgar moving like a war machine, head thrust forward, feet striking the street solidly.

Swiftly, Paul explained the value of the dwarf and handed Bijaz over to Stilgar. The pace of the vision moved here with great rapidity. Stilgar sped away with Bijaz. Security Guards enveloped Paul. Orders were given

to send men down the street toward the house beyond Otheym's. The men hurried to obey, shadows among silent shadows.

"We want live prisoners," one of the Guard officers snarled.

The sound was a viscon-echo in Paul's ears. It went with solid precision, vision matching reality, tick for tick. Ornithopters drifted down across the moon.

The night was full of Imperial troopers attacking.

A soft hiss grew out of the other sounds, climbed to a roar while they still heard the sibilance. It picked up a terra cotta glow that hid the stars, engulfed the moon.

Paul, knowing that sound and glow from the earliest nightmare glimpses of his vision, felt an odd sense of fulfillment. It went the way it must.

"Stone burner!" The cry was all around him. "Stone burner... stone burner..."

Because it was required of him, Paul threw a protective arm across his face, dove for the low lip of a curb. It already was too late, of course.

He knew it.

Where Otheym's house had been, there stood now a pillar of fire, a blinding jet roaring at the heavens. It gave off a dirty brilliance which threw into sharp relief every ballet movement of the diving crowd.

For every member of this frantic throng it was too late.

TO BE CONCLUDED

CREDO

by
Lester
del Rey



WILLY LEY

The First Citizen of the Moon

The world of science fiction has just lost its most important citizen. And—if histories are written by men of understanding—it may some day be realized that world has lost one of its singularly great leaders, surely a fact not readily apparent to some during his life. Willy Ley died of a sudden heart attack on June 24, 1969.

I cannot write a standard obituary for a man who stood high in my affection and regard for thirty years. It is the evening before his funeral as I type this and I am unable to be remote and objective about a life that gave so much. Nor do I feel that such remoteness would be proper in the pages of this magazine, to which

Willy was a contributor for almost half of his adult life.

This issue marks the end of the nineteenth full year during which his column *For Your Information* has appeared. It is without question a record for the longest series of continuous contributions to any science-fiction magazine by other than the editor.

Other records were set by him in the past. In the fifteen years between his arrival in this country and his first article for *Galaxy* he contributed to at least 90 issues of various science-fiction magazines, doing articles that found regular publication at a time when such science articles were far less in demand than they are today.

Out of the twenty-seven men who have been picked as guests of honor at World Science Fiction Conventions, Willy Ley was the only one whose reputation was based upon the writing of nonfiction. This was in 1953, at the second Convention held in Philadelphia. Looking back, I realize now that no one bothered to comment on the distinction, probably because Willy was automatically accepted by readers and fellow writers as one who was not limited by any category.

His choice of nonfiction was certainly not dictated by any lack of ability to handle fiction. He proved this by the few pieces of pure fiction he wrote under the name of Robert Willey—a pen-name meant to separate fiction from fact, not to conceal his identity. F. Orlin Tremaine blurbed his *At the Perihelion* as a "great science fiction novel" and gave it the cover, despite the seeming obscurity of the name. And his *Fog* was a piece of mood writing that proved to have a lasting effect in a strange way.

Fog was a story of the utter confusion and dark mood of what real revolution means to those who see it without being able to know exactly what they are seeing. Two years later I did a story in which I tried to capture some of the same elements of suspense in a different way at the request of the editor—the story

was *Nerves* and may be the best I ever wrote. Theodore Sturgeon told me years later that his *Killdozer* was a second derivation. How far the chain went I do not know.

Willy's influence on the entire stream of science fiction was far stronger than this, however. His popular books and articles on the hard facts of rockets, orbits and space travel established the basic handling of such subjects. Writers who never read any of his early books on rocketry derived most of their facts from him through the stories by men who had studied his writings.

In time his reputation spread far beyond any genre. Men who would never read science fiction—or indeed anything except the tabloid newspapers—were impressed by his byline. I know from personal experience that the fact that one knew Willy Ley was a unique testament to one's respectability.

Willy never let his stature bother him. From the time I read his first fan letter in an American science-fiction magazine until the last time I saw him, he took it for granted that the writers and readers of science fiction were somehow his real family. He was always ready to respond to a request for an appearance at a fan conclave when his schedule permitted and he was often one of the first men I met at the annual

World Science Fiction Conventions.

But his real importance lay beyond any realm of fiction. I said at the beginning that he was our most important citizen but I did not mean to indicate that he was our greatest writer. His role in the field of science fiction was beyond that.

John W. Campbell summed it up in one way when he said, "Most of us dream about the future and some of us write about our dreams. But Willy Ley did something about his."

He took what must be the very basic dream with which science fiction began—the desire that man should get off a single planet and spread his seed throughout the heavens. And more than any other man, often by the least obvious means, he built that dream into reality.

WILLY LEY was born in October, 1906, in Berlin. He was educated in general science of the day, with particular emphasis on zoölogy. Anyone who has read his books on the strange animal life of earth, such as *The Lungfish*, *the Dodo and the Unicorn*, or his numerous articles in this magazine, must be aware of his never-failing interest and his ability. Had he continued his studies he might have become a zoölogist of note. But he quit before winning his degree. (He did receive a n

Honorary Doctorate from Adelphi University in 1960.)

He had discovered a little book full of obscure mathematical proof that rockets had the ability to reach the moon. This was printed in 1923 and was the work by Hermann Oberth. It had caused some flurry of argument among scientists and engineers, few of whom accepted it, but it was far beyond the grasp of the average man.

Willy decided it had to be made available to all. And shortly before he was twenty, he wrote a book without mathematics to tell the story to the world. When it was published it did what he wanted. Men who could share in the dream of the conquest of space suddenly found a reason to believe it was possible. As Willy had suspected, where the learned men of the day were content to argue, the less pedantic enthusiasts began to scheme and plan to do something about Oberth's message.

The impetus of Willy's first book, *Die Fahrt im Weltall* (Journey into Space), brought a group of men to join him in organizing the German Rocket Society (*Verin für Raumschiffahrt*) in 1927.

Work had been done on rockets and their theory before. In America, Goddard had experimented with liquid fuels and had written a brief paper on high-

altitude rockets for use in weather observations. In Russia, Tsiolkovsky had spent years working out detailed plans. But these had languished without attention.

The VfR, as it was known, began to accumulate funds for research. They used every means to scrape together enough to build crude models and to find a testing ground. Willy took on the thankless task of getting out the bulletins of the VfR through which members—who eventually included a rocket tyro named Werner von Braun, were recruited and funds solicited. He arranged for the German film company producing Fritz Lang's *Frau im Mond* to agree to contribute to the VfR in return for advice and a public demonstration of a rocket. And he gave himself the task of keeping things moving during the difficult years when highly independent and willful men often disagreed violently. He spoke casually about one of his darkest periods: "In order to raise money, I went on a lecture tour." He was then twenty-five years old and branded by many as a crackpot for fooling with what sane men knew was nonsense—but he never made an issue of the difficulties and derision he faced on his tour.

Unlike most hobby groups, the VfR actually did valuable research. They built and tested rocket motors, and they learned

the necessary hard lessons. Willy contributed the suggestion that they switch from gasoline to alcohol and water to burn with their liquid oxygen—and for the first time the pioneers had a self-cooling motor—as all later rockets did. He also discovered how much water should be mixed with the alcohol for proper cooling. Eventually the VfR produced a working prototype of a motor that has remained basically the same ever since. This spelled some five years of research by a group of enthusiasts with limited funds.

BY 1933 Willy began to realize he could no longer stay in Hitler's Germany. Count Wernher von Braun had been drafted from the VfR to the military development of rockets, after learning the hard lessons from the work at the VfR testing field. As events proved, von Braun was a single-minded genius who let no considerations stand in the way of his doing the one thing he could do better than anyone else.

But Willy was not the type of man who could sacrifice in any way his basic humanity for expediency—even for the sake of the dream that dominated his life. Without question the future of rockets—in the early thirties—lay in Germany; but too many other things also lurked in the dark future of that Germany.

Willy reached America in 1935. There he tried briefly to carry on with the American Rocket Society but their work seemed pure hobby stuff to him after the serious efforts of the VfR.

I met him first thirty years ago, when his dream of space seemed farthest from its goal. The U.S., whose citizen he became in 1944, was at war with Germany and Willy was still a resident alien, somewhat suspect and restricted, however well he had proved his loyalty to the principles for which he fought. We talked of many things, from multilingual jokes to a Van Vogt novel.

He was a big man—not so much in height as in impression of hugeness and massive solidity. And the deep voice that came out was a growl that made him seem a bear in human form. His English was not quite colloquial then, though his vocabulary and understanding of grammar had been extraordinary even before he came here. He evidenced no sign of harshness or bitter feelings. He was a warm and comfortable man.

And he talked of rockets and of what could be done. Whenever he could, he still wrote articles on the subject to prepare the general public for what he felt they must begin after the shooting was over.

For a brief time after the war it seemed that his hopes would reach fruition. The U.S. had recovered a stock of the V-2 rockets which

von Braun had developed from their origins at the VfR. The entire crew from Peenemünde under von Braun had surrendered to the Americans. We tested the rockets and we began building our own Viking. Willy was busy with lectures and consultations.

For a time he seemed headed again for actual work with rockets. His contract with *Galaxy* even had an escape clause permitting him to quit if he were called to rocket duty. But his inability to agree with any man whom he knew to be either wrong or foolish kept him from the good graces of some who had discovered rockets in 1946 and were now trying to be experts.

HE CONTINUED lecturing and writing and preparing the public. And then the boom in rocketry collapsed. The dark days following 1950 saw endless restrictions on research. Military rockets were not big enough to carry the projected H-bombs, it was felt, so they were moved aside for more and bigger bombers. Space was something we meant to explore some day, of course—but there was time for that when the cold war ended. And if we went into space, it couldn't be with one of von Braun's war rockets. (Von Braun was then well along in his design of today's Saturn booster.) Ours would have to be a "peace" rocket.

Willy sighed softly once in a while when I met him in the company of a small group that met at the home of Fletcher Pratt. But usually he did not let his disappointments hide the conviviality that was so much a part of him. He was perhaps the most cheerful of all at the old science-fiction Hydra Club among fans and professionals.

And he went on working. He lectured, he wrote books. His manual on rocketry first came out in 1944 as *Rockets* and has been in continuous printings under various names since then. It is currently *Rockets, Missiles and Men in Space* and has probably given understanding of space travel to more men than any dozen other books. He collaborated with von Braun on a series of articles for *Collier's* that did more to convince the public of the possibility of space travel than anything else. And he acted as an advisor to Walt Disney to get his message across.

Then came Sputnik. Willy had known of the plans to send up one of von Braun's military rockets with a small canister at least a year ahead of the Russians and of its cancellation because of inter-service nonsense. He shrugged and went cheerfully on television to calm and explain and offer hope.

The point I'm making is that Willy lived. He lived more in time with his days—and the world's

tomorrows—than most men. He was more than a prophet without honor. Events did not pass him by. Rather, he shaped them.

The work done at the VfR would have been impossible without him. And while vague other signs of some interest in rocketry existed, nothing so shaped the maturity of the space age. The VfR took an idea and made it into engineering practice, enabling von Braun to enlarge it and demonstrate it over London.

It was largely Willy's work that killed the public antipathy to rockets after their use as a terror weapon and began to make people dream of space again. When Kennedy proposed the race to the moon he mentioned huge sums required to finance it. The cost was more than had ever been spent on a science project. Yet when public polls were taken, it turned out that the people were willing to support our space venture—and not just for national prestige. Somehow, through all his articles, Willy and those who were converted by him had managed to convince half of the nation that there was value enough in the space program for them to go along with the huge expenditure.

Willy Ley had quietly determined before he was twenty years of age that men should set foot on the Moon during his lifetime. And step by step, he led them to turn their eyes from this single planet

to the vast reaches of space.

It took him forty years and he missed his goal of seeing the first man on the moon by a month. But there is precedent for that.

And Moses went up from the plains of Moab unto the mountain. . . And the Lord showed him

all the land. . . unto the utmost sea. . . And the Lord said unto him. . . I will give it unto thy seed; I have caused thee to see it with thine eyes, but thou shalt not go over thither.

Today I weep for the loss of a friend and a very great man. ●

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(Continued from page 107)

announced that the *Roseau* satellite would be shipped to the Russian space center at Baikonur, to be launched by a Russian rocket. Expected launch date is November, 1971.

The Europeans seem to have revamped quite a number of programs late in 1968. ESRO decided that the TD1 satellite should be taken out of the regular schedule and be made a special project. Scheduled launch date for that satellite is March, 1972. The TD1 satellite is an astronomical satellite like the American OAO (Orbiting Astronomical Observatory), the second of which was put into orbit on December 7, 1968. (The first OAO was suc-

cessfully orbited on April 8, 1966, but a malfunction of the power supply rendered it useless.) Details of the design of TD1 have not yet been released. Presumably the design is still what is called fluid, meaning undecided.

At the same time ELDO decided to discontinue a satellite development called *Vempe*. The French and West German governments immediately signed a contract for a continuation of *Vempe* between them. Junkers in Germany had started development of the payload for ELDO and will now reshape it for the German government. The French have promised to orbit it with the larger version of the *Diamant* rocket. No launch date has been set. ●

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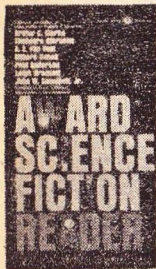
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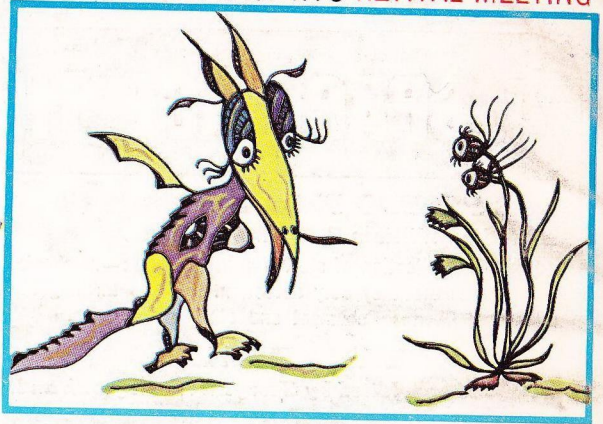
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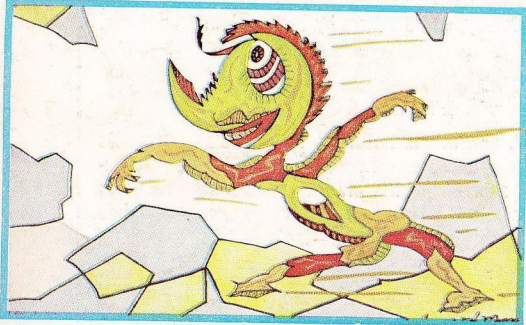
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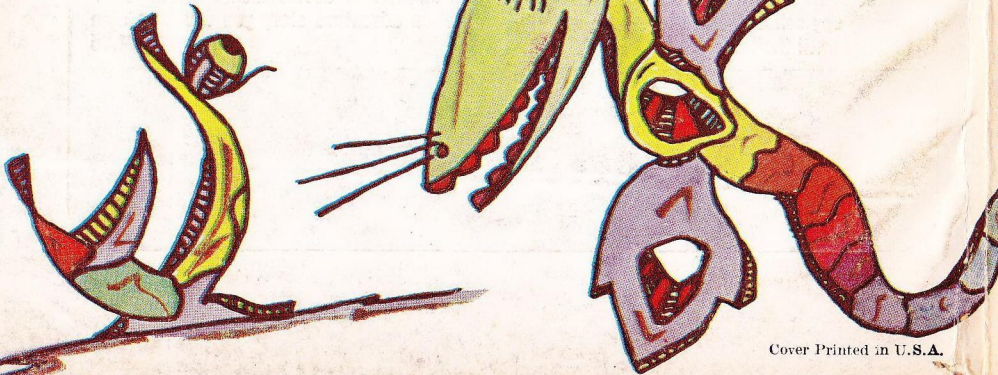
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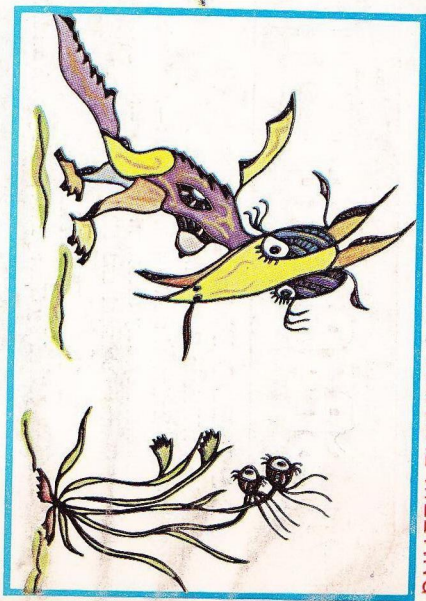


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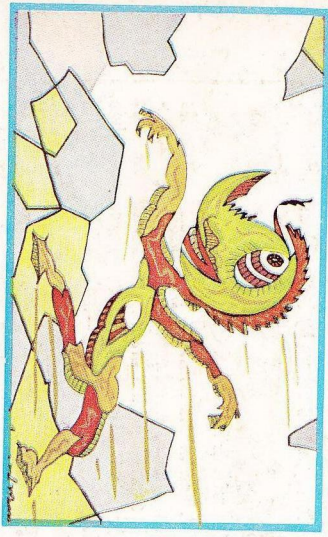




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