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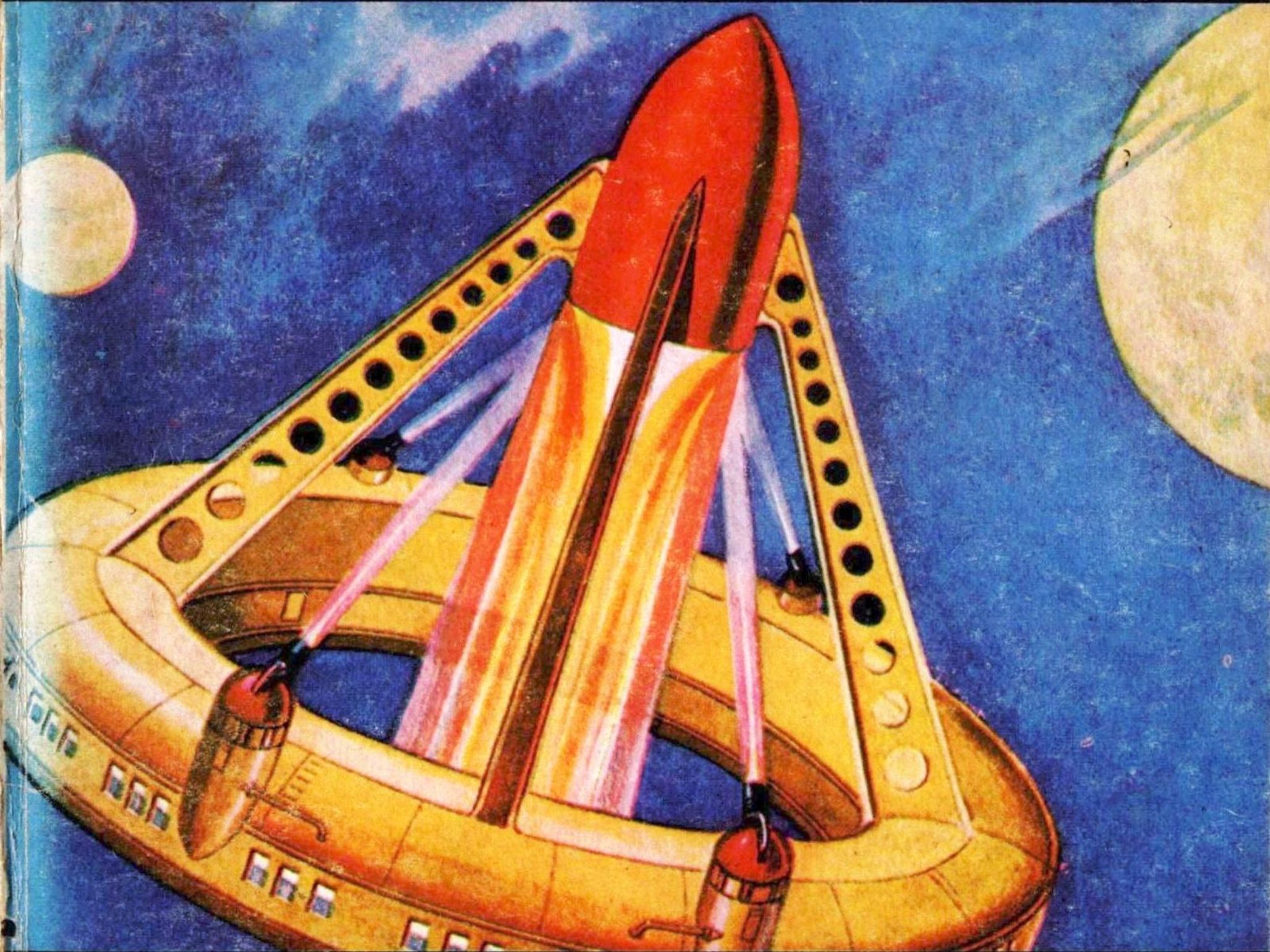
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August, 1966 Vol. 40, No. 7

PHILIP K. DICK'S LATEST

YOUR APPOINTMENT WILL BE YESTERDAY 6

NOVELET

THE VOICE OF THE VOID, **JOHN W. CAMPBELL, JR.** 28

SHORT STORIES

THE GONE DOGS, **FRANK HERBERT** 55

THE PENT HOUSE, **DAVID H. KELLER, M.D.** 74

THE MAN WHO KNEW ALL THE ANSWERS, **DONALD BERN** 83

THE METAL MARTYR, **ROBERT MOORE WILLIAMS** 91

SERIAL

STOPOVER IN SPACE, **MURRAY LEINSTER** 104

(Conclusion)

FEATURES

DISCUSSIONS 160

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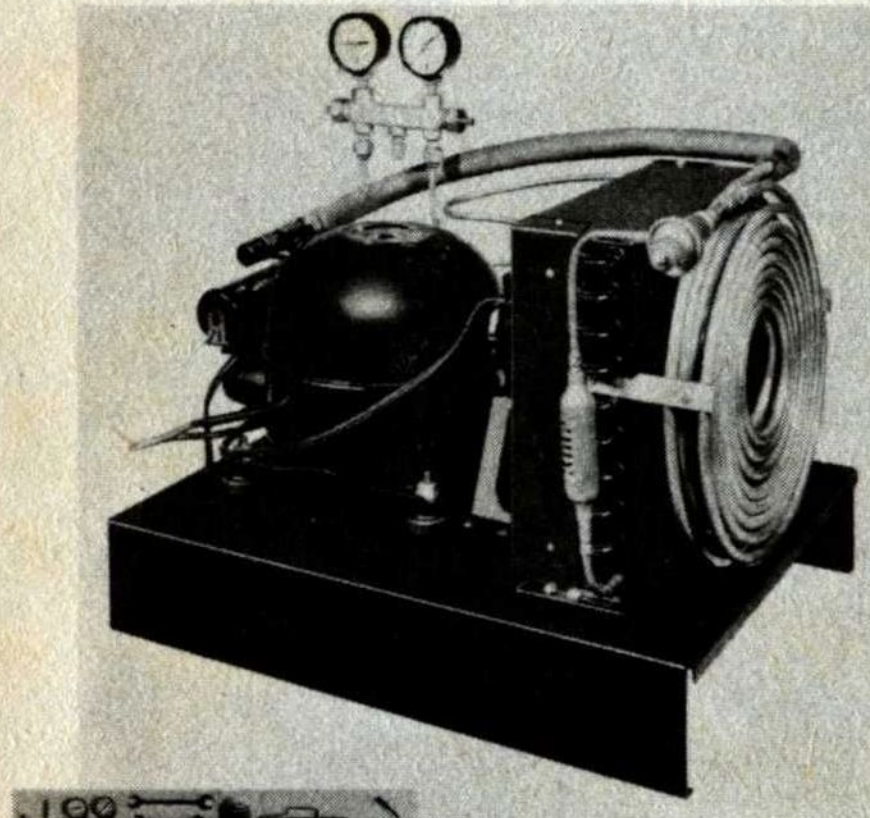
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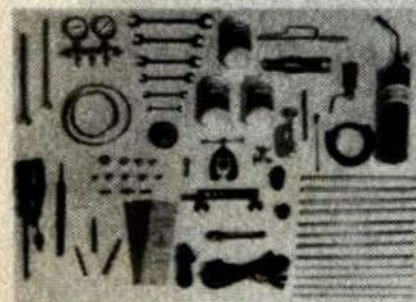


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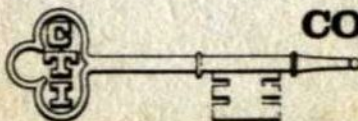
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Whenever anyone tries to bring up that hoary chestnut about prolific writers not being any good, we're just as skeptical about it as most of you must be—especially when we recall the highly productive careers of s-f greats like Murray Leinster, Henry Kuttner, Robert A. Heinlein—and Philip K. Dick, who ever since *Solar Lottery* (1955) has turned out so many top books—including the Hugo-winning *The Man in the High Castle*—that we're not even going to say anything at all about this latest Dick yarn—except to note (just what you'd expect from a master of plot) that it begins in the future, continues into the past, and ends in so horrifying a muddle that we're glad none of us has to cope with the Hobart time-reversal field—at least not yet!

YOUR APPOINTMENT WILL BE YESTERDAY

PHILIP K. DICK

Illustrated by GRAY MORROW

SUNLIGHT ascended and a penetrating mechanical voice declared, "All right, Lehrer. Time to get up and show 'em who you are and what you can do. Big man, that Niehls Lehrer; everybody acknowledges it — I hear them talking. Big man, big talent, big job. Much admired by the public at large. You awake now?"

Lehrer, from his bed, said, "Yes." He sat up, batted the sharp-voiced alarm clock at his

bedside into nullification. "Good morning," he said to the silent apartment. "Slept well; I hope you did, too."

A press of problems tumbled about his disordered mind as he got grouchy from the bed, wandered to the closet for clothing adequately dirty. Supposed to nail down Ludwig Eng, he said to himself. The tasks of tomorrow become the worse tasks of today. Reveal to Eng that only one copy of his great-selling book is left in all the world; the time is coming soon for him to act, to do the job only he can do. How would Eng feel? After all, sometimes inventors refused to sit still and do their job. Well, he decided, that actually consisted of a syndicate-problem; theirs, not his. He found a stained, rumpled red shirt; removing his pajama top he got into it. The trousers were not so easy; he had to root through the hamper.

And then the packet of whiskers.

My ambition, Lehrer thought as he padded to the bathroom with the whisker packet, is to cross the W.U.S. by streetcar. Whee. At the bowl he washed his face, then lathered on foam-glue, opened the packet and with adroit slappings managed to convey the whiskers evenly to his chin, jowls, neck; in a moment he had expertly gotten the whiskers to adhere. I'm fit now, he decided as

YOUR APPOINTMENT WILL BE YESTERDAY



he reviewed his countenance in the mirror, to take that streetcar ride; at least as soon as I process my share of sogum.

Switching on the sogum pipe he accepted a good masculine bundle, sighed contentedly as he glanced over the sports section of the San Francisco *Chronicle*, then at last walked to the kitchen and began to lay out soiled dishes. In no time at all he faced a bowl of soup, lambchops, green peas, Martian blue moss with egg sauce and a cup of hot coffee. These he gathered up, slid the dishes from beneath and around them — of course checking the windows of the room to be sure no one saw him—and briskly placed the assorted foods in their proper receptacles which he placed on shelves of the cupboard and in the refrigerator. The time was eight-thirty; he still had fifteen minutes to get to work. No need to kill himself hurrying; the People's Topical Library section B would be there when he arrived.

It had taken him years to work up to B. He did not perform routine work any longer, not at a section B desk, and he most certainly did not have to arrange for the cleaning of thousands of identical copies of a work in the early stages of eradication. In fact strictly speaking he did not have to participate in eradication at all; minions employed wholesale by the library took care of that coarse

duty. But he did have to deal tete-a-tete with a vast variety of irritable, surly inventors who balked at their assigned—and according to the syndicate mandatory—final cleaning of the sole-remaining typescript copy of whatever work their name had become linked with—linked by a process which neither he nor the assorted inventors completely understood. The syndicate presumably understood why a particular given inventor received a particular assignment and not some other assignment entirely. For instance, Eng and HOW I MADE MY OWN SWABBLE OUT OF CONVENTIONAL HOUSEHOLD OBJECTS IN MY BASEMENT DURING MY SPARE TIME. Lehrer reflected as he glanced over the remainder of the newspaper. Think of the responsibility. After Eng finished, no more swabbles in all the world, unless those untrustworthy rogues in the F.N.M. had a couple illicitly tucked away. In fact, even though the ter-cop, the terminal copy, of Eng's book still remained, he already found it difficult to recall what a swabble did and what it looked like. Square? Small? Or round and huge? Hmmm. He put down the newspaper and rubbed his forehead while he attempted to recall—tried to conjure up an accurate mental image of the device while it was still possible to do so. Because as soon as Eng

reduced the ter-cop to a heavily inked silk ribbon, half a ream of bond paper and a folio of fresh carbon paper there existed absolutely no chance for him or for anyone else to recall either the book or the mechanism which the book described.

That task, however, would probably occupy Eng the rest of the year. Cleaning of the ter-cop had to progress line by line, word by word; it could not be handled as were the assembled printed copies. So easy, up until the terminal typescript copy, and then... well, to make it worth it to Eng, to compensate him for the long, arduous work, a really huge bill would be served on him: the task would cost Eng something on the order of twenty-five thousand poscreds. And since eradication of the swabble book would make Eng a poor man, the task. . . .

By his elbow on the small kitchen table the receiver of the phone hopped from its mooring onto the table, and from it came a distant tiny shrill voice. "Goodbye, Niehls." A woman's voice.

Lifting the receiver to his ear he said, "Goodbye."

"I love you, Niehls," Charise McFadden stated in her breathless, emotion-saturated voice. "Do you love me?"

"Yes, I love you, too," he said. "When have I seen you last? I hope it won't be long. Tell me it won't be long."

"Most probably tonight" Charise said. "After work. There's someone I want you to meet, a virtually unknown inventor who's desperately eager to get official eradication for his thesis on, ahem, the psychogenic origins of death by meteor-strike. I said that because you're in section B—"

"Tell him to eradicate his thesis himself."

"There's no prestige in that." Earnestly, Charise pleaded, "It's really a dreadful piece of theorizing, Niehls; it's as nutty as the day is long. This boy, this Lance Arbuthnot—"

"That's his name?" It almost persuaded him. But not quite. In the course of a single day he received many such requests, and every one, without exception came represented as a crank piece by a crank inventor with a crank name. He had held his chair at section B too long to be easily snared. But still—he had to investigate this; his ethical structure insisted on it. He sighed.

"I hear you groaning," Charise said brightly.

Lehrer said, "As long as he's not from the F.N.M."

"Well—he is." She sounded guilty. "I think they threw him out, though. That's why he's here and not there."

But that, Lehrer realized, proved nothing. Arbuthnot—possibly—did not share the fanatical,

militant convictions of the ruling elite of the Free Negro Municipality; possibly he was too moderate, too balanced for the Bards of the republic carved out of quondam Tennessee, Kentucky, Arkansas and Missouri. But then again he perhaps had too fanatical a view. One never knew; not until one met the person, and sometimes not even then. The Bards, being from the East, had managed to dribble a veil over the faces of three-fifths of mankind, a veil which successfully obscured motive, intention and god knew what else.

"And what is more," Charise continued, "he personally knew Anarch Peak before Peak's sad shrinking."

"Sad!" Lehrer bristled. "Good riddance." There: that had been the foremost eccentric and idiot of the world. All Lehrer needed was the opportunity to rub shoulders with a follower of the newly parasitic Anarch. He shivered, recalling from his professional eclectic books-examining at the library the accounts of mid-twentieth century race violence; out of the riots, lootings and killings of those days had come Sebastian Peak, originally a lawyer, then a master spellbinder, at last a religious fanatic with his own devout following. . . a following which extended over the planet, although operating primarily in the F.N.M. environs.

"That could get you in trouble with God," Charise said.

"I have to get to work now," Lehrer said. "I'll phone you during my coffee break; meanwhile I'll do some research on Arbuthnot in the files. My decision as regards his nut-head theory of psychosomatic meteor-strike deaths will have to wait until then. Hello." He hung up the phone, then, and rose swiftly to his feet. His soiled garments gave off a truly gratifying odor of must as he made his way from his apartment to the elevator; satisfaction as to his grooming made him brighten. Possibly—despite Charise and this, her newest fad, the inventor Arbuthnot—today might be a good day after all.

But, underneath, he doubted it.

When Niehls Lehrer arrived at his section of the library, he found his slim blonde-haired secretary Miss Tomsen trying to rid herself—and him, too—of a tall, sloppily-dressed middle-aged gentleman with a briefcase under his arm.

"Ah, Mr. Lehrer" the individual said in a dry, hollow voice as he made out Lehrer, obviously recognizing him at once; he approached Niehls, hand extended. "How nice to meet you, sir. Goodbye, goodbye. As you people say out here." He smiled a flashbulb instantly-vanishing smile at Niehls, who did not return it.

"I'm quite a busy man," Niehls said, and continued on past Miss Tomsen's desk to open the inner door to his private suite. "If you wish to see me, you'll have to make a regular appointment. Hello." He started to shut the door after him.

"This concerns the Anarch Peak," the tall man with the briefcase said. "Whom I have reason to believe you're interested in."

"Why do you say that?" He paused, irritated. "I don't recall ever expressing any interest in anyone of Peak's sort."

"You must recall. But that's so. You're under Phase, here. I'm oriented in the opposite, normal time-direction; therefore what for you will soon happen is for me an experience of the immediate past. *My* immediate past. May I take a few minutes of your time? I could well be of great use to you, sir." The man chuckled. "'Your time.' Well-put, if I do say so. Yes, decidedly your time, not mine. Just consider that this visit by myself took place yesterday." Again he smiled his mechanical smile — and mechanical it was; Niehls now perceived the small but brilliant yellow stripe sewed on the tall man's coat-sleeve. This person was a robot, required by law to wear the identifying swath so as not to deceive. Realizing this, Niehls' irritation grew; he had a strict, deeply-imbedded prejudice against ro-

bies which he could not rid himself of; which he did not want to rid himself of, as a matter of fact.

"Come in," Niehls said, holding the door to his lavish suite open. The roby represented some human principal; it had not dispatched itself: that was the law. He wondered who had sent it. Some functionary of the syndicate? Possibly. In any case, better to hear the thing out and then tell it to leave.

Together, in the main work-chamber of the library suite, the two of them faced each other.

"My card," the roby said, extending its hand.

He read the card, scowling.

Carl Gantrix

Attorney At Law W.U.S.

"My employer," the roby said. "So now you know my name. You may address me as Carl; that would be satisfactory." Now that the door had shut, with Miss Tomsen on the other side, the roby's voice had acquired a sudden and surprising authoritative tone.

"I prefer," Niehls said cautiously, "to address you in the more familiar mode as Carl Junior. If that doesn't offend you." He made his own voice even more authoritative. "You know, I seldom grant audiences to robots. A quirk, perhaps, but one concerning which I am consistent."

"Until now," the robot Carl

Junior murmured; it retrieved its card and placed it back in its wallet. Then, seating itself, it began to unzip its briefcase. "Being in charge of section B of the library, you are of course an expert on the Hobart Phase. At least so Mr. Gantrix assumes. Is he correct, sir?" The robot glanced up keenly.

"Well, I deal with it constantly." Niehls affected a vacant, cavalier tone; it was always better to show a superior attitude when dealing with a roby. Constantly necessary to remind them in this particular fashion — as well as in countless others — of their place.

"So Mr. Gantrix realizes. And it is to his credit that via such a realization he has inferred that you have, over the years, become something of an authority on the advantages, uses and manifold disadvantages of the Hobart reverse-time field. True? Not true? Choose one."

Niehls pondered. "I choose the first. Although you must take into account the fact that my knowledge is practical, not theoretical. But I can correctly deal with the vagaries of the Phase without explaining it. You see, I am innately an American; hence pragmatic."

"Certainly." The roby Carl Junior nodded its plastic humanoid head. "Very good, Mr. Lehrer. Now down to business. His Mightiness, the Anarch Peak, has be-

come infantile and will soon shrivel up entirely into a homunculus and re-enter a nearby womb. Correct? It is only a matter of time — your time, once again."

"I am aware," Niehls said, "that the Hobart Phase obtains in most of the F.N.M. I am aware that His Mightiness will be within a handy nearby womb in no more than a matter of months. Frankly, this pleases me. His Mightiness is deranged. Beyond doubt; clinically so, in fact. The world, both that on Hobart Time and on Standard Time, will benefit. What more is there to say?"

"A lot more," Carl Junior answered gravely. Leaning forward he deposited a host of documents on Niehls' desk. "I respectfully insist that you examine these."

Carl Gantrix, by means of the video circuit of the robot's system, treated himself to a leisurely inspection of the top librarian Niehls Lehrer as that individual ploughed through the wearying stack of deliberately obscure pseudo documents which the robot had presented.

The bureaucrat in Lehrer had been ensnared by the bait; his attention distracted, the librarian had become oblivious to the robot and to its actions. Therefore, as Lehrer read, the robot expertly slid its chair back and to the left side, close to a reference card case of impressive proportions.

Lengthening its right arm, the robot crept its manual grippers of fingeroid shape into the nearest file of the case; this Lehrer did of course not see, and so the robot continued with its assigned task. It placed a miniaturized nest of embryonic robots, no larger than pinheads, within the card file, then a tiny find-circuit transmitter behind a subsequent card, then at last a potent detonating device set on a three-day command circuit.

Watching, Gantrix grinned. Only one construct remained in the robot's possession, and this now appeared briefly as the robot, eying Lehrer sideways and cautiously, edged its extensor once more toward the file, transferring this last bit of sophisticated hardware from its possession to the library's.

"Purp," Lehrer said, without raising his eyes.

The code signal, received by the aud chamber of the file, activated an emergency release; the file closed in upon itself in the manner of a bivalve seeking safety. Collapsing, the file retreated into the wall, burying itself out of sight. And at the same time it ejected the constructs which the robot had placed inside it; the objects, expelled with electronic neatness, bounced in a trajectory which deposited them at the robot's feet, where they lay exposed in clear view.

Good heavens, the robot said involuntarily, taken aback.

Lehrer said, "Leave my office immediately." He raised his eyes from the pseudo documents, and his expression was cold. As the robot reached down to retrieve the now-exposed artifacts he added, "And leave those items here; I want them subjected to lab analysis regarding purpose and source." He reached into the top drawer of his desk, and when his hand emerged it held a weapon.

In Carl Gantrix's ears the phone-cable voice of the robot buzzed. "What should I do, sir?"

"Leave presently." Gantrix no longer felt amused; the fuddy-duddy librarian was equal to the probe, was capable in fact of nullifying it. The contact with Lehrer would have to be made in the open, and with that in mind Gantrix reluctantly picked up the receiver of the vidphone closest to him and dialed the library's exchange.

A moment later he saw, through the video scanner of the robot, the librarian Niehls Lehrer picking up his own phone in answer.

"We have a problem," Gantrix said. "Common to us both. Why, then, shouldn't we work together?"

Lehrer answered, "I'm aware of no problem." His voice held ultimate calmness; the attempt by the robot to plant hostile hardware in his work-area had not

ruffled him. "If you want to work together," he added, "you're off to a bad start."

"Admittedly," Gantrix said. "But we've had difficulty in the past with you librarians." Your exalted position, he thought. But he did not say it. "This has to do with the Anarch Peak. My superiors believe that there has been an attempt made to obliterate the Hobart Phase in regard to him — a clear violation of law, and one posing a great danger to society...in that, if successfully done, it would in effect create an immortal person by manipulation of known scientific laws. While we do not oppose the continual attempt to bring about an immortal person by use of the Hobart Phase, we do feel that the Anarch is not the person. If you follow."

"The Anarch is virtually re-absorbed." Lehrer did not seem too sympathetic; perhaps, Gantrix decided, he doesn't believe me. "I see no danger." Coolly he studied the robot Carl Junior facing him. "If there is a menace it appears to me to lie —"

"Nonsense. I'm here to help you; this is for the library's benefit, as well as my own."

"Who do you represent?" Lehrer demanded.

Gantrix hesitated, then said, "Bard Chai of the Supreme Clearness Council. I am following his orders."

"That puts a different light on matters." The librarian's voice had darkened; and, on the vid-screen, his expression had become harder. "I have nothing to do with the Clearness Council; my responsibility goes to the Erads entirely. As you certainly know."

"But are you aware —"

"I am aware only of this." Reaching into the drawer of his desk librarian Lehrer brought out a square gray box, which he opened; from it he produced a typed manuscript which he displayed for Gantrix's attention. "The sole extant copy of HOW I MADE MY OWN SWABBLE OUT OF ORDINARY HOUSEHOLD OBJECTS IN MY SPARE TIME. Eng's masterpiece, which borders on the eradicated. You see?"

Gantrix said, "Do you know where Ludwig Eng is, at the moment?"

"I don't care where he is; I only care where he'll be at two-thirty yesterday afternoon—we have an appointment, he and I. Here in this office at section B of the library."

"Where Ludwig Eng will be at two-thirty yesterday," Gantrix said meditatively, half to himself, "depends a good deal on where he is right now." He did not tell the librarian what he knew: that at this moment Ludwig Eng was somewhere in the

Free Negro Municipality, possibly trying to obtain audience with the Anarch.

Assuming that the Anarch, in his puerile, diminished state, could still grant audience to anyone.

The now-tiny Anarch, wearing jeans and purple sneakers and a many-times-washed T-shirt, sat on the dusty grass studying intently a ring of marbles. His attention had become so complete that Ludwig Eng felt ready to give up; the boy opposite him no longer seemed conscious of his presence. All in all, the situation depressed Eng; he felt more helpless than before he had come.

Nevertheless, he decided to try to continue. "Your Mightiness," he said, "I only desire a few more moments of your time."

With reluctance the boy looked up. "Yes sir," he said in a sullen, muted voice.

"My position is difficult," Eng said, repeating himself; he had over and over again presented the childified Anarch with the identical material, and each time in vain. "If you as Anarch could telecast an appeal throughout the Western United States and the F.N.M. for people to build several swabbles here and there while the last copy of my book still survives —"

"That's right," the boy murmured.

"Pardon?" Eng felt a flicker of hope; he watched the small smooth face fixedly. Something had formed there.

Sebastian Peak said, "Yes sir; I hope to become Anarch when I grow up. I'm studying for that right now."

"You are the Anarch. You *were* the Anarch." He sighed, feeling crushed. It was clearly hopeless. No point in going on—and today was the final day, because yesterday he would meet with an official from the People's Topical Library and that would be that.

The boy brightened. He seemed, all at once, to take interest in what Eng had to say. "No kidding?"

"God's truth, son." Eng nodded solemnly. "In fact, legally speaking you still hold the office." He glanced up at the lean Negro with the overly-massive side arm who currently constituted the Anarch's bodyguard. "Isn't that so, Mr. Plaut?"

"True, your Mightiness," the Negro said to the boy. "You possess the power to arbitrate in this case, having to do with this gentleman's manuscript." Squatting on his lank haunches the bodyguard sought to engage the boy's wandering attention. "Your Mightiness, this man is the inventor of the swabble."

"What's that?" The boy glanced from one to the other of them, scowling with suspicion. "How

much does a swabble cost? I only have fifty cents; I got it as my allowance. Anyhow I don't think I want a swabble. I want some gum, and I'm going to the show." His expression became fixed, rigidly in place. "Who cares about a swabble?" he said with disdain.

"You have lived one hundred and sixty years," the bodyguard Plaut told him. "Because of this man's invention. From the swabble the Hobart Phase was inferred and finally established experimentally. I know that means nothing to you, but —" The bodyguard clasped his hands together earnestly, rocking on his hocks as he tried to keep the boy's constantly dwindling attention focussed. "Pay attention to me, Sebastian; this is important. If you could sign a decree... while you can still write. That's all. A public notice for people to —"

"Aw, go on; beat it." The boy glared at him with hostility. "I don't believe you; something's the matter."

Something is wrong, all right, Eng thought to himself as he rose stiffly to his feet. And there appears to be next to nothing that we can do about it. At least without your help. He felt defeated.

"Try him again later," the bodyguard said, also rising; he looked decidedly sympathetic.

"He'll be even younger," Eng said bitterly. And anyhow there

was no time; no later existed. He walked a few steps away, then, overcome with gloom.

On a tree branch a butterfly had begun the intricate, mysterious process of squeezing itself into a dull brown cocoon, and Eng paused to inspect its slow, labored efforts. It had its task, too, but that task, unlike his, was not hopeless. However the butterfly did not know that; it continued mindlessly, a reflex machine obeying the urgings programmed into it from the remote future. The sight of the insect at work gave Eng something to ponder; he perceived the moral in it, and, turning, walked back to confront the child who squatted on the grass with his circle of gaily-colored luminous marbles.

"Look at it this way," he said to the Anarch Peak; this was probably his last try, and he meant to bring in everything available. "Even if you can't remember what a swabble is or what the Hobart Phase does, all you need to do is sign; I have the document here." Reaching into his inside coat pocket he brought the envelope out, opened it. "When you've signed this, it will appear on world-wide TV, at the six p.m. news in each time zone. I tell you what I'll do. If you'll sign this, I'll triple what you've got in the way of money. You say you have fifty cents? I'll give you an additional dollar, a

genuine paper one. What do you say? And I'll pay your way to the movies once a week, at the Saturday matinee for the balance of the year. Is it a deal?"

The boy studied him acutely. He seemed almost convinced. But something — Eng could not fathom what — held him back.

"I think," the bodyguard said softly, "he wants to ask his dad's permission. The old gentleman is now alive; his components migrated into a birth-container about six weeks ago, and he is currently in the Kansas City General Hospital's birth ward undergoing revivification. He is already conscious, and His Mightiness has spoken with him several times. Is that not so, Sebastian?" He smiled gently at the boy, then grimaced as the boy nodded. "So that is it," he said to Eng, then. "I was right. He's afraid to take any initiative, now that his father's alive. It's very bad luck as far as you're concerned, Mr. Eng; he's just plain dwindled too much to perform his job. And everybody knows it as a fact."

"I refuse to give up," Eng said. But the truth of the matter was that purely and simply he had already given up; he could see that the bodyguard, who spent all his waking time with the Anarch, was correct. It had become a waste of time. Had this meeting taken place two years from now, however. . . .

To the bodyguard he said heavily, "I'll go away and let him play with his marbles." He placed the envelope back in his pocket, started off; then, pausing, he added, "I'll make one final try yesterday morning. Before I'm due at the library. If the boy's schedule permits it."

"It surely does," the bodyguard said. He explained, "Hardly anybody consults him any more, in view of his — condition." His tone was sympathetic, and for that Eng felt appreciation.

Turning wearily he trudged off, leaving the one-time Anarch of half the civilized world to play mindlessly in the grass.

The previous morning, he realized. My last chance. Long time to wait and do nothing.

In his hotel room he placed a phone call to the West Coast, to the People's Topical Library. Presently he found himself facing one of the bureaucrats with whom, of late, he had had to deal so much. "Let me talk directly to Mr. Lehrer," he grunted. Might as well go directly to the source, he decided; Lehrer had final authority in the matter of his book — now decayed to a mere type-written manuscript.

"Sorry," the functionary told him, with a faint trace of disdain. "It is too early; Mr. Lehrer has already left the building."

"Could I catch him at home, do you think?"

"He is probably having breakfast. I suggest you wait until late yesterday. After all, Mr. Lehrer needs some time for seclusive recreation; he has many heavy and difficult responsibilities to weigh him down." Clearly, the minor functionary had no intention of cooperating.

Dully depressed, Eng hung up without even saying hello. Well, perhaps it was for the better; undoubtedly Lehrer would refuse to grant him additional time. After all, as the library bureaucrat had said, Lehrer had pressures at work on him, too: in particular the Erads of the syndicate...those mysterious entities who saw to it that destruction of human inventions be painstakingly carried out. As witness his own book. Well, time to give up and head back west.

As he started from his hotel room, he paused at the mirror of the vanity table to see whether his face had, during the day, absorbed the packet of whiskers which he had foam-glued onto it. Peering at his reflection, he rubbed his jowls. . . .

And screamed.

All along his jaw-line the dark stubble of newly-grown facial hair could be seen. He was growing a beard; stubble was coming in—not being absorbed.

What this meant he did not know. But it terrified him; he stood gaping, appalled now by

the fright collected within his reflected features. The man in the mirror did not look even vaguely familiar; some ominous underlying deformity of change had attacked it. But why? And—how?

Instinct told him not to leave the hotel room.

He seated himself. And waited. For what, he did not know. But one thing he did know. There would be no meeting with Niehls Lehrer of the People's Topical Library at two-thirty yesterday afternoon. Because—

He scented it, grasped it intuitively from the one single glance in the mirror of his hotel room's vanity table. There would be no yesterday; not for him, anyhow.

Would there be for anyone else?

I've got to see the Anarch again, he said haltingly to himself. The hell with Lehrer; I don't have any intention of trying to make that or any other appointment with him now. All that matters is seeing Sebastian Peak once more; in fact as soon as it's possible. Perhaps earlier today.

Because once he saw the Anarch he would know whether what he guessed were true. And if it were true, then his book, all at once, lay outside jeopardy. The syndicate with their inflexible program of eradication no longer menaced him—possibly. At least he hoped so.

But only time would tell. *Time.*

The entire Hobart Phase. It was somehow involved.

And—possibly—not just for him.

To his superior Bard Chai of the Clearness Council, Gantrix said, "We were right." He recycled the tape recorder with shaking hands. "This is from our phone tap, video, to the library; the inventor of the swabble, Ludwig Eng, attempted to reach Lehrer and failed. There was therefore no conversation."

"Hence nothing to record," the Bard purred cuttingly. His round green face sagged in pouting disappointment.

"Not so. Look. It is Eng's image that's significant. He has spent the day with the Anarch — and as a consequence his age-flow has doubled back upon itself. See with your own eyes."

After a moment, in which he scrutinized the video image of Eng, the Bard leaned back in his chair, said, "The stigma. Heavy infestation of beard-stubble; certain index in a male, especially of the Cauc persuasion."

"Shall we rebirth him now?" Gantrix said. "Before he reaches Lehrer?" He had in his possession a superbly made gun which would dwindle any person in a matter of minutes — dwindle him directly into the nearest womb, and for good.

"In my opinion," Bard Chai said, "he has become harmless.

The swabble is nonexistent; this will not restore it." But within, Bard Chai felt doubt, if not concern. Perhaps Gantrix, his subordinate, correctly perceived the situation; he had done so in the past, on several critical occasions ... which explained his current value to the Clearness Council.

"But if the Hobart Phase has been cancelled out for Eng." Gantrix said doggedly, "then the development of the swabble will start up again. After all, he possesses the original typed manuscript; his contact with the Anarch has taken place before the Eradicators of the syndicate induced the final stage of destruct."

That certainly was true; Bard Chai pondered and agreed. And yet despite this knowledge he had trouble taking Ludwig Eng seriously; the man did not look dangerous, bearded or otherwise. He turned to Gantrix, began to speak—and then abruptly ceased.

"Your expression strikes me as unusual," Gantrix said, with palpable annoyance. "What's wrong?" He seemed uneasy, as the Bard's stare continued. Concern replaced displeasure.

"Your face," Bard Chai said, keeping his composure with the greatest of effort.

"What about my face?" Gantrix's hand flew to his chin; he massaged briefly, then blinked. "My god."

"And you have not been near

the Anarch. So that does not explain your condition." He wondered, then, about himself; had the reversal of the Hobart Phase extended to his own person as well? Swiftly he explored his own jaw-line and dewlap. And distinctly felt burgeoning bristle. Perplexing, he thought wildly to himself. What can account for this? The reversal of the Anarch's time-path might be only an effect of some prior cause involving them all. This put a new light on the Anarch's situation; perhaps it had not been voluntary.

"Can it be," Gantrix said reflectively, "that the disappearance of Eng's device could explain this? Except for mention in the typewritten manuscript there is no longer any reality connected with the swabble. Actually, we should have anticipated this, since the swabble is intimately associated with the Hobart Phase."

"I wonder," Bard Chai said, still rapidly pondering. But the swabble had not strictly speaking created the Hobart Phase; it served to direct it, so that certain regions of the planet could evade the Phase entirely—whereas others had become completely mired in it. Still, the disappearance of the swabble from contemporary society must diffuse the Hobart Phase equally over everyone; and an outgrowth of this might be a diminution to beneath the level of effectiveness

for those—such as himself and Carl Gantrix—who had participated in the Phase fully.

"But now," Gantrix said thoughtfully, "the inventor of the swabble, and first user of it, has returned to normal time; hence the development of the swabble has again manifested itself. We can expect Eng to build his first working model of the device at any time, now."

The difficulty of Eng's situation had now become apparent to Bard Chai. As before, use of the man's mechanism would spread throughout the world. But — as soon as Eng built and placed in operation his pilot swabble, the Hobart Phase would resume; once more Eng's direction would reverse itself. The swabbles would then be abolished by the syndicate until, once again, all that remained was the original typewritten manuscript—at which point normal time would reestablish itself.

It appeared to Bard Chai that Eng had gotten himself trapped in a closed loop. He would oscillate within a distinct small interval: between possessing only a theoretical account of the swabble and in actuality constructing and operating a functioning model. And tagging along with him would go a good portion of Terra's population.

We are caught with him, Bard Chai realized gloomily. How do

we escape? What is our solution?

"We must either force Eng back into complete obliteration of his manuscript, including the idea for the construct," Gantrix said, "or —"

"But that is impossible," Bard Chai broke in impatiently. "At this point the Hobart Phase weakens automatically, since no working swabbles exist to sustain it. How, in their absence, can Eng be forced backward in time a single step farther?"

It constituted a valid—and unanswerable — query; both men realized that, and neither spoke for a time. Gantrix morosely continued to rub his jaw, as if he could perceive the steady growth of beard-stubble. Bard Chai, on the other hand, had withdrawn into an intensive introverted state; he pondered and repondered the problem.

No answer came. At least not yet. But, given time —

"This is extremely difficult," the Bard said, with agitation. "Eng will probably throw together his first swabble at any moment. And once more we will be cycled in a retrograde direction." What worried him now was one terrible, swift insight. This would occur again and again, and each time the interval would be shortened further. Until, he ruminated, it becomes a stall within a single microsecond; no time-progression in either direction

YOUR APPOINTMENT WILL BE YESTERDAY



will be able to take place.

A morbid prospect indeed. But one redemptive factor existed. Eng undoubtedly would perceive the problem, too. And he would seek a way out. Logically, it could be solved by him in at least one way: he could voluntarily abstain from inventing the swabble. The Hobart Phase, then, would never assert itself, at least not effectively.

But such a decision lay with Ludwig Eng alone. Would he cooperate, if the idea were presented to him?

Probably not. Eng had always been a violent and autistic man; no one could influence him. This, of course, had helped him become an original personality; without this Eng would not have amounted to anything as an inventor, and the swabble, with its enormous effect on contemporary society, would never have come into existence.

Which would have been a good thing, the Bard thought morosely. But until now we could not appreciate this.

He appreciated it now.

The solution which Gantrix had proposed, that of rebirthing Eng, did not appeal to him. But it looked more and more to his eyes as the only way out. And a way out had to be found.

With profound irritation the librarian Niehls Lehrer inspected the clock on his desk, then his

appointment book. Eng had not shown up; two-thirty had arrived, and Lehrer sat alone in his office. Carl Gantrix had been correct.

While pondering the meaning of this he heard, dimly, the phone ringing. Probably Eng, he decided as he reached for the receiver. A long way off, phoning in to say that he can't make it. I'll have trouble with this; the syndicate won't like it. And I'll have to alert them; I have no choice.

Into the phone he said, "Good-bye."

"I love you, Niehls." A breathless feminine voice; this was not the call which he had anticipated. "Do you love me?"

"Yes, Charise," he said. "I love you, too. But dammit, don't call me during business hours; I thought you knew that."

Contritely, Charise McFadden said, "Sorry, Niehls. But I keep thinking about poor Lance. Did you do the research on him that you promised? I bet you didn't."

As a matter of fact he had; or more accurately he had instructed a minor employee of the library to do the task for him. Reaching into the top desk drawer he brought out Lance Arbuthnot's folio. "Here it is," he informed Charise. "I know all there is to know about this crank. All I care to know, more correctly." He leafed among the sheets of paper within the file. "There's not much here, actually. Arbuth-

not hasn't *done* much. You understand I can only take time to go into this matter because a major library client has failed—so far—to keep his two-thirty appointment. If he does show up, I'll have to terminate this conversation."

"Did Arbuthnot know the Anarch Peak?"

"That part of his account is true."

"And he is a genuine crank. So eradicating his thesis would be a distinct gain for society. It's your duty." Over the vid portion of the phone she batted her long lashes coaxingly. "Come on Niehls, dear. Please."

"But," Lehrer continued inflexibly, "there is nothing here suggesting that Arbuthnot spent any time concocting a paper dealing with the psychosomatic aspects of death by meteor-strike,"

She colored, hesitated, then said in a low voice, "I, um, made that up."

"Why?"

After a pause, Charise said falteringly, "Well, h-h-he's—the fact is, I'm his mistress."

"The fact is," Lehrer said, boring ahead with ruthless vigor, "you don't really know what his thesis is about. It may be perfectly rational. A significant contribution to our society. Correct?" He did not wait for her reply; reaching, he started to break the phone circuit.

"Wait." She swallowed rapidly, ducked her head, then plunged on as his fingers touched the trip switch of the phone. "All right, Niehls; I admit it. Lance refuses to tell me what his thesis is about. He won't tell anybody. But if you'll undertake to eradicate it—don't you see? He'll have to reveal it to you; your analysis of it is required before the syndicate accepts it. Isn't that so? And then you'll tell me what it's all about. I know you will."

Lehrer said, "What do you care what it's about?"

"I think," Charise said, hesitating, "it has to do with me. Honest. There's something strange about me, and Lance noticed it. I mean, that's not so unusual when you consider how, um, close we two are; we see so much—if you'll excuse the expression—of each other."

"I find this a dull topic," Lehrer said frigidly. At this point, he said to himself, I wouldn't accept Arbuthnot's thesis at any cost to me. Even if they debited me to the tune of ten thousand poscreds. I'll talk to you some other time," he said, and broke the phone circuit.

"Sir," his secretary, Miss Tomsen said over the desk intercom, "there's this man out here who's been waiting since six this evening. He says he only wants a second or two of your time, and Miss McFadden led him to under-

stand that you'd be glad to—"

"Tell him I died in office," Lehrer said harshly.

"But you can't die, sir. You're under the Hobart Phase. And Mr. Arbuthnot knows that, because he mentioned it. He's been sitting out here doing a Hobart type horoscope on you, and he predicts that great things have happened to you during the previous year. Frankly he makes me nervous; some of his predictions sound so accurate."

"Fortune-telling about the past doesn't interest me," Lehrer said. "In fact, as far as I'm concerned, it's a hoax. Only the future is knowable." The man is a crank, all right, Lehrer realized. Charise told me the truth in that respect. Imagine maintaining in all seriousness that what has already happened, what has vanished into the limbo of nebulous yesterday, can be predicted. There's one killed every minute, as P.T. Barnum phrased it.

Maybe I should see him, he reflected. Charise is right; ideas like this ought to be eradicated for the good of mankind, if not for my own peace of mind.

But that was not all. Now a measure of curiosity overcame him. It would be interesting, in a feeble way, to hear the idiot out. See what he predicted, especially for the recent few weeks. And then accept his thesis for eradication. Be the first person he casts

a Hobart type of horoscope for.

Undoubtedly, Ludwig Eng did not intend to show up. The time Lehrer said to himself, must be two o'clock by now. He glanced at his wristwatch.

And blinked.

The watch hands semaphored two-forty.

"Miss Tomsen," Lehrer said into the intercom, "What time do you have?"

"Leaping J. Lizards," Miss Tomsen said. "It's earlier than I thought. I distinctly recall it being two-twenty just a moment ago. My watch must have stopped."

"You mean it's later than you thought. Two-forty is later than two-thirty."

"No sir, if you don't resent my disagreeing with you. I mean, it's not my place to tell *you* what's what, but I am right. You can ask anybody. I'll ask this gentleman out here. Mr. Arbuthnot, isn't two-forty earlier than two-twenty?"

Over the intercom speaker came a masculine voice, dry and controlled. "I'm only interested in seeing Mr. Lehrer, not in holding academic discussions. Mr. Lehrer, if you will see me, I guarantee you'll find my thesis the most flagrant piece of outright trash you've ever had brought to your attention; Miss McFadden will not mislead you."

"Send him in," Lehrer reluc-

tantly instructed Miss Tomsen. He felt perplexed. Something weird had begun to happen, something which was connected with the orderly flow of time. But he could not make out precisely what.

A dapper young man, in the first stages of baldness, entered the office, a briefcase under his arm. He and Lehrer briefly shook and then Arbuthnot seated himself facing the desk.

So this is the man Charise is having an affair with, Lehrer said to himself. Well, so it goes. "I'll give you ten minutes," he stated. "And then you're out of here. You understand?"

"I have concocted here," Arbuthnot said, unzipping his briefcase, "the most outrageously impossible concept imaginable to my mind. And I think official eradication is absolutely essential, here, if this idea is to be kept from taking root and doing actual outright harm. There are people who pick up and act on any idea, no matter how contrary to rational good sense. You're the only person I've shown this to, and I show it to you with grave reservations." Arbuthnot then, in one brisk and spasmodic motion, dropped his typewritten work on the surface of Niehls Lehrer's desk. And sat back, waiting.

With professional caution, Lehrer surveyed the title of the paper,

then shrugged. "This is nothing more than an inversion of Ludwig Eng's famous work." He slid his castered chair back from the desk, disavowing the manuscript; raising both hands he gestured in dismissal. "This is not so preposterous; it's logically thinkable to reverse Eng's title — anybody could do it at any time."

Arbuthnot said grimly, "But no one has. Until now. Read it once again and think out the implications."

Unimpressed, Lehrer once more examined the thick bundle of pages.

"The implications," Arbuthnot continued in a low, quiet, but tense voice, "of the eradication of this manuscript."

The title, still unimpressive to Lehrer, read:

HOW I DISASSEMBLED MY
SWABBLE INTO ORDINARY
HOUSEHOLD OBJECTS IN
MY BASEMENT DURING
MY SPARE TIME

"So?" Lehrer said. "Anyone can disassemble a swabble; in fact it's being done. In fact, thousands of swabbles are being eradicated; it's the pattern. In fact, I doubt whether a single swabble is now to be found anywhere in —"

"When this thesis is eradicated," Arbuthnot said, "as I am certain it has been, and recently, what will the negation consist of? Think it out, Lehrer. You know the implications of

cleaning out of existence Eng's premise; it means the end of the swabble and therefore the Hobart Phase. In fact, we'll see a return to normal time-flow throughout the Western United States and the Free Negro Municipality within the past forty-eight hours . . . as Eng's manuscript nears syndicate jurisdiction. The eradication of my work, then, if you follow the same line of reasoning—" He paused. "You see what I've done, don't you? I've found the way to preserve the swabble. And to maintain the now-disintegrating Hobart Phase. Without my thesis we'll gradually lose all that the swabble has brought us. The swabble, Lehrer, eliminates death; the case of the Anarch Peak is only the beginning. But the only way to keep the cycle alive is to balance Eng's paper with mine; Eng's paper moves us in one direction; my paper reverses it, and then Eng's becomes operative once more. Forever, if we want it. Unless—and I can't imagine this happening, although admittedly it is theoretically possible—a hopeless fusion of the two time-flows results."

"You're a crank," Lehrer said thickly.

"Exactly." Arbuthnot nodded. "And that's why you'll accept my paper for official syndicate eradication. *Because you don't believe me.* Because you think

this is absurd." He smiled slightly, his eyes gray, intelligent and penetrating.

Pressing the on-button of his intercom, Lehrer said, "Miss Tomsen, notify the local outlet of the syndicate that I'd like an Erad sent to my office as soon as possible. I have some junk here that I want him to rule on. So we can begin the business of terminal copy extinction."

"Yes, Mr. Lehrer," Miss Tomsen's voice came.

Leaning back in his chair, Lehrer surveyed the man seated across from him. "Does that suit you?"

Still smiling, Arbuthnot said, "Perfectly."

"If I thought there was anything in your concept—"

"But you don't," Arbuthnot said patiently. "So I'm going to get what I want; I'll be successful. Sometime tomorrow or at the latest the day after."

"You mean yesterday," Lehrer said. "Or the day before." He examined his wristwatch. "The ten minutes are up," he informed the crank inventor. "I'll ask you now to leave." He placed his hand on the bundle of papers. "This stays here."

Rising, Arbuthnot moved toward the door of the office. "Mr. Lehrer," he said, pausing, "don't be alarmed by this, but with all due respects, sir, you need a shave."

"I haven't shaved in twenty-three years," Lehrer said. "Not since the Hobart Phase first took effect in my area of Los Angeles."

"You will by this time tomorrow," Arbuthnot said. And left the office; the door shut after him.

After a moment of reflection, Lehrer touched the button of the intercom. "Miss Tomsen, don't send anyone else in here; I'm cancelling my appointments for the balance of the day."

"Yes sir." Hopefully, Miss Tomsen said, "He was a crank, wasn't he? I thought so; I can always tell. You're glad you saw him."

"Will see him," he corrected.

"I think you're mistaken, Mr. Lehrer. The past tense—"

"Even if Ludwig Eng shows up," Lehrer said, "I don't feel like seeing him. I've had enough for today." Opening his desk drawer he carefully deposited Arbuthnot's manuscript within it, then shut it once more. He reached toward the ash tray on the desk, selected the shortest—and hence best—cigarette butt, dabbed it against the ceramic surface until it began to burn,

then lifted it to his lips. Puffing shreds of tobacco into it, he sat staring fixedly out the office window at the poplar trees that lined the walk to the parking lot.

The wind, rushing about, gathered up a quantity of leaves, swirled them onto the branches of the trees, adhered them in a neat arrangement which decidedly added to the beauty of the trees.

Already, some of the brown leaves had turned green. In a short while autumn would give way to summer, and summer to spring.

He watched appreciatively. As he waited for the Erad sent out by the syndicate. Due to the crank's deranged thesis, time had once more returned to normal. Except—

Lehrer rubbed his chin. Bristles. He frowned.

"Miss Tomsen," he said into the intercom, "will you step in here and tell me whether or not I need a shave?"

He had a feeling that he did. And soon.

Probably within the previous half hour. End

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CHAD OLIVER'S NEW COMPLETE NOVEL:

JUST LIKE A MAN

IN THE *July* FANTASTIC

Now that Doc Smith is gone, the mantle of super-science fiction falls on the capable shoulders of John W. Campbell, who—both as writer and editor—is primarily responsible for most of what is modern about the science fiction of our time. Back in the thirties, of course, he was the exciting new author of super-science epics like "Invaders from the Infinite" and—shortly after that—the wonderfully "modern" Don A. Stuart stories. Since then, however, not too much fiction has come from the Campbell typewriter—primarily because he's much too busy turning out some of the most provocative editorials in the field—but after you read "The Voice from the Void," we think you'll join us in hoping that the hiatus is only temporary.

THE VOICE OF THE VOID

JOHN W. CAMPBELL, JR.

PERHAPS you or I would have hesitated to call him human, this strange small man. He seemed lost in the great dim-lighted observatory. On all sides of the room panels of some polished black material glistened in the ruddy light, and on all their great surfaces were instruments and faintly glowing screens. High above the smooth floor a great transparent roof was hung in a half-glimpsed arch, glasslike it was, but the lack of beams told of a strength and toughness no glass ever knew. Through it came every

vibration that struck it, infra-light or ultra-light. Now in its center there glowed a great mass of lambent red flame, the dying sun. To Hal Jus, astronomer, the room was flooded with light of the noon-day sun. The dull red glow that gave even his pale face a ruddy glow was to him pure white. But then Hal Jus could see heat, and to him blue light was a scientific term for a thing beyond human vision.

Ten billion years had wrought strange changes in the human race. For ten thousand thousand millenniums they had lived on

the planets of the solar system, but now the mighty sun was dying. There had been no decadence in this race, through all their history had come a constant fight with a persistent enemy, Nature. But it was a kindly enemy, for the contest had constantly developed man to meet the new emergencies.

Ten thousand years ago the sun had grown too cool to supply heat enough for man; it was no longer possible to live on the frozen planets, and the two greatest of them had been hurled across the system to feed the dying fires. Jupiter and Saturn had been sacrificed. Neptune and Uranus had long since escaped from the weakened clutches of the vanishing sun, and now of the family of original wheeling planets, only four were left: Mars, Earth, Venus and Mercury. And now again the fires of the system were dying too low. One and a half million tons of matter must be destroyed every second in that titanic furnace to supply a comfortable amount of heat. In our day three million tons of matter vanish every second, to be poured out as a mighty flood of heat and light that sweeps across the depths of space to us. The inner planets had been drawn far closer to the parent body, but even these heroic measures were failing.

Hal Jus worked at the controls

of the electroscope for a moment and on one of the lam-bently glowing screens an image began to form, grayish at first, then quickly taking form and color. A great sphere swam on the screen; slowly as Hal Jus increased the power the body seemed to come nearer—it grew larger; it filled the screen, then rapidly there came a picture of low, age-old hills, worn low till they scarcely lifted their heads above the surrounding country. A mighty city of glistening metal buildings rising tier on tier a few miles north seemed to dwarf the hills into utter insignificance. Once a hill had lifted its proud head far into the blue of a two-hundred mile thick belt of atmosphere, but now the once mighty Mt. Everest alone remained as a relic of the high-flung mountains that old Earth had once known.

High in the jet black sky, a scant hundred miles from the ground below, a mighty space-freighter was taking off for Venus. The thin belt of atmosphere permitted it to reach a high speed quickly. Already it was in full stride and heading at 1,000 miles a second for Venus.

The scene on the screen blurred, grew gray, and faded out. Hal Jus was shifting the great electroscope tube. Again the screen glowed, and again an image appeared. It cleared quickly,

then suddenly leaped into full life and color. The scene showed mighty machines working in a great pit of freshly tumbled soil. It was a land of intense shadow and where the dim red light of the distant sun did not touch, there was intense, utter blackness. There was no atmosphere here. And now, as a great freighter swung low, a machine on the ground below turned on a ray that stabbed out sharp and brilliant; a moment later the freighter tug lifted a half-million-ton piece of the planet on its attractor beams and rapidly gained headway as it shot off toward distant Venus.

The view became wider, the figure of the machines smaller. Then, as Hal Jus increased the observation distance, the entire planet came into view, as much of the planet Mars as was left. The great excavations were extending over all the surface. They were paring it down from all sides lest they disturb the balance of the planet.

Again the scene went blank. Now there formed on it a view of the starry heavens with glowing pinpoint stars. Suddenly this began to expand; star after star was forced from the field as the growing picture centered on one that burned bright in the center of the field. Mighty Betelgeuse glowed in the center of the field. It was a blurred image, like a tiny disc, but tremendous as was the power

of the instrument, it could not have enlarged the image to that extent. The disc-like appearance was due to the tremendous brightness of the star spreading a bit on the sensitive vision receiver cell.

Slowly the new mighty instrument swept over the field. Here and there a star would leap out of the darkness to form a burning disc, as one of the stars distant less than a dozen light years, swept across the field. Then at last came a star that blazed out as a burning disc an inch and a half across, emitting long tongues of shooting flame. Slowly it crept across the field. The instrument was adjusted for the motion of the Earth and this slow creeping was due to the motion of the star through space. Around it, far off across the field, circled a lone, small planet. Hal Jus watched it a while, then turned with a call of greeting, snapping off the current in the mighty instrument as several men walked in. They were seated now in several rows of chairs before the largest of the screens that were suspended on the walls of the room.

For ages men had known that the sun was dying. In our day men can tell that within the next ten or eleven billion years it will become a closed star—not a cold star but a closed star. The energy of the sun comes from the destruction of the matter of which it is

composed, which becomes floods of energy. This change is possible at a temperature of 40,000,000 degrees C., but below that it cannot take place. Thus, at the center of the sun, where this change is taking place, the matter is at that terrific temperature. As the sun grows older, more and more of the matter sinks into the center and reaches the region of awful heat. The atoms are so violently colliding with each other at that temperature, that the atoms themselves are knocked to pieces by the violence of their collision. If the molecules of a substance collide sufficiently violently, they are broken up. Thus, at 5000 degrees, the molecules of water collide so violently that they cannot maintain themselves, and the shock breaks them down into hydrogen and oxygen atoms. But at 40,000,000 degrees the atoms collide so violently they are decomposed into protons and electrons. At this temperature, a further, subtle change takes place, and the electrons and the protons suddenly are gone, and in their place is an equal mass of energy. For energy in any form has mass, and mass in any form is a measure of the energy content. Thus to say "one gram" is an easier way of saying "nine hundred million million million ergs," but the two mean the same to Nature. Now an atom is something like a porcupine with his quills up; it is much

bigger in looks than in fact, only an atom has much longer "quills." An atom has much more empty space than anything else. Suppose our porcupines have quills a mile long. If all those quills are on end we won't be able to pack the animals very closely, but if we can induce them to become more friendly and lay the quills down, then the density of our imaginary population of porcupines will be greatly increased. Similarly the atoms, with the electrons revolving in wide orbits, occupy a much greater space than they really need. In the tremendous heat of the Sun, the atoms are so battered, the electrons are knocked off the nuclear protons, and we can imagine the quills now lying down. The density will be far greater. This is demonstrated by the density of some stars which are now known to have a density of over 1000. This is the result of packing the electrons and protons in the center, which is gradually going on in all stars.

Gravity increases four times if the distance is halved. As the matter inside becomes denser and denser, the star contracts, till finally its density reaches a tremendous figure.

The Sun in Hal Jus's day was becoming a closed star. Long since the X-rays had ceased. Gradually the ultra-light and the blue light had diminished; the red and

infra reds had been accentuated; for the light was changed by the passage through that intense gravitational field. Hal Jus had, less than two thousand years ago, predicted the exact time of the Sun's final decay. After ten more years, the Sun would be unable to support its family. The planets they now inhabited—Earth, Venus and Mercury—were supported artificially. The atmospheres of all the planets had long since slowly dissipated into space, and with them had gone the water. These vital things were being replaced constantly by transmutation of the elements of the rocks of the planets. Long ages ago Earth had had a large satellite, which had been used through the ages to supply energy for the factories of man, and to supply the necessary atmosphere. The satellites of Mars had gone as had Saturn with its rings, Jupiter with its satellites, along with the asteroids; but before it escaped, much of Neptune had been freighted to the habitable planets. And now, since Mars had grown too cold, it too, was being sacrificed. Already it was honeycombed with great caverns that had been used as sources of materials and energy. Now it was being split up into small parts, and freighted to the other planets. Already the work was well under way. Mars was furthest from the sun, and smaller than Venus or Earth.

But when men were assured that there was no hope of life in the solar system for more than half a lifetime, they began an even more frantic search for still another way to overcome this last crushing blow of Nature.

But at last a thing was announced that switched the endeavor of the scientists to a new line. The impossible was done. Einstein had said that it was impossible to signal faster than light. But it had been done. A scientist had signaled the seventy-five million miles from Earth to Venus in so short a time that the carefully prepared cathode ray oscillograph could not detect it. The signal was sent by radio and by the new method exactly simultaneously, and when they reached the station on Venus, the difference in time was just long enough for the radio to make the trip. It was a modification of something that we know in our day, a modification possible only to these descendants of ten billion years of science. Phase velocity we know. When X-Rays pass through certain materials, the index of refraction is less than one, and this can only be true if the velocity in those materials is greater than the velocity of light. The true velocity of the rays is not, but there is a second velocity, the phase velocity, that under those circumstances is greater

than the real velocity of light.

Phase velocity is due to a wave traveling along the wave chain. A man can go faster than the train he is riding on by walking toward the engine, but practically speaking he cannot reach the station before the train. Similarly, the phase velocity cannot reach the station before the light or X-Rays do. But for countless ages the light has poured forth from the sun, and a message sent down that long train would be able to go many, many trillions of miles at a speed far greater than that of light. That was the new hope of life. For man must escape from the dying sun or perish with it. And now the experiments were pushed forward with new hope.

Then a brilliant young physicist, scarcely through the seventy-year course in one of the great technical institutes, devised a new machine that brought the idea considerably closer to complete success. Television had been invented many years ago and constantly improved. Long since had they gotten away from the scanning apparatus, and the principle was well nigh forgotten, but in some dusty, neglected volume Morus Tol discovered the diagrams. And with a simple arrangement of known machines he made a wonderful mechanism that had been worked on for many, many ages. He made a scanning machine that worked in

the fourth dimension, thereby being enabled to scan all the other three simultaneously. His first experiments led to amazing images, which, thrown on a fourth dimensional screen, could be seen to pick up solid bodies. The work of lifting them was done by the motor driving the fourth dimensional projector. The drag of the body's weight tended to throw the image out of adjustment, but by making a very powerful motor, they could show the image of a man lifting thousands of pounds! The images were absolutely solid. The man did no work.

And then came new developments. The experiments were safer now. Wherever danger was incurred, the scientist merely made his image do the actual experiment! But Morus Tol still led the field. It was he who finally developed the apparatus that could project the images and have them come into three dimensions, being without the aid of a projector at the receiving end. Already the machines had been used in connection with the phase-velocity signaling system.

It was while he was working on the development of his apparatus that the fatal accident occurred and killed him. Luckily he had kept a careful record of all his experiments, and men were able to duplicate them with the aid of remnants of his apparatus. He

had been working on the actual making of the images; he wanted to be able to keep them real without the machine; in other words, he wanted to give them actual existence; he wanted to reconstruct, atom for atom, the object under his fourth dimensional scanner.

He had been trying to find some ray that would respond to the individual characteristics of the atoms under consideration. He had found it, but finding it he had met his death. The ray had attacked him somehow. It does not seem likely that he experimented on himself without trying it on some inanimate body first. But perhaps he did. At any rate, it did what he hoped, it scanned him and recognized each individual atom, and each separate molecule, and as far as it went, it was successful. But in scanning him the ray released all the energy in the atoms of his body. He was killed instantly and most of his apparatus was utterly ruined. However, enough was saved to make a beginning possible for the others. And on this basis they built.

As the ray scanned and recognized an atom it drew out its energy, to leave it free. This had fused the apparatus, stopped the ray, and killed the scientist. Knowing the danger, others experimented. By draining the energy away safely they scanned a small object, and sent the signals

to another station where, by feeding the necessary energy into the machine, they were able to reconstruct it. The first step had been taken.

But it required many years to develop this apparatus. Now came the greatest problem of all. They must find some means to send the material image to a predestined terminal without having a station there to receive it. This could be done with a three dimensional shadow image. Could they do it with the solid bodies?

The ten thousand years had dwindled steadily—five thousand had passed before the development of the fourth dimensional scanning. Morus Tol was still a young man when he was killed, but with four thousand two hundred years yet to go, they met their hardest problem, and they were without a genius to solve it.

The long years had dwindled to less than two centuries before there came a man who solved the problem of a refinement of the vibration control. It is as impossible for me to describe the machines of that day as it would be for a blind man to describe red to another. It is a thing inconceivable to each. But it was done—only to find that the shock of the journey killed all living creatures. And then, ten short years before the sun at last faded forever, the last bridge was crossed. A man in a space ship

was projected from a laboratory on Earth to a point near Venus. All the System watched that demonstration through the news machines.

Long since they had decided where they would go. Now that they could travel with almost infinite speed, they chose a goal that would be safe to life for aeons to come. BETELGUESE! It was their goal now.

And now out in space the great sending station was constructed. The ship to be sent was put in position before it; the scanner viewed it; and the signal for each atom and each molecule followed each other in swift flight on the train of light waves that was their wire. One billion miles from Betelguese the ship would be reintegrated from the energy sent along the beam of the phase-velocity sender.

And now, in the observatory of Hal Jus, the greatest men of the system had gathered to watch those men far out in space. With them had been sent another machine to be operated by one man, a miniature phase-velocity sender that could, if necessary, send the ship back. This was to be stationed in space, going in an orbit about the mighty star.

Now, above the soft whirr of the news-casters focussed on the great screen, there came an audible sigh of excitement, as there flickered on the great screen a dim

gray image, blurred and indistinct. Well it might be. Sent on the phase-velocity projector across the universe, it was bringing them the scene within the re-created ship—suddenly the great screen was filled with a brightly lighted scene, and through the sound pick-up came a subdued hum of the mighty engines in the powerroom. Through the windows of the ship they could see a brilliant shaft of bluish light pouring over the floor. Out through the main pilot's window they saw the blazing field of stars—and there they saw one dim red one, barely discernible. Probably if they had been there they could not have seen it. Only the super-sensitiveness of the machine made it visible—their sun as it looked millenniums ago! For the light had been traveling slowly for thousands of years to reach the distance their machine had reached in less than an hour.

The men had been anesthetized before the process began, and now they lay in deep sleep. The automatic controls were running the ship, taking complete charge of it.

Strange these men would seem to us. They were under four feet in height, with great barrel chests, long arms and short legs. The dying planets had scant atmosphere, and economy advised a low pressure of the precious gases, lest too much diffusion take place;

and Mercury, the smallest planet, put a distinct limit to the pressure. They journeyed from one planet to the other so frequently that an equal pressure on each was almost a requisite. The long arms ended in slender, delicate fingers that were the most perfect tools ever developed. And the toes, too, had become highly prehensile. The many machines that man had built had required all his directing powers. The feet had at first been used only to push pedals, but gradually there came other purposes. Those members could be so useful!

The head was not much larger than ours, but the high, straight forehead seemed much larger on the small man. The brain was deeply creased, the convolutions so complex that, without increasing the size greatly, the surface had been multiplied many times. And it is the surface area that counts. Their large eyes seemed to hold a gentle benignity that would so transcend us as to leave us contented to watch only; still, there was in them a fire of ambition, of hope and of adventure. But we can no more hope to understand their personality than a child of a few days can understand us.

But now the men in the car out in space were stirring; consciousness was returning. The Commander approached the view plate now.

"Sir, I wish to report a successful trip. Betelguese is within one billion miles. One man has died, but the ship's doctor will have him around shortly, as his body temperature is still above 95. We will head for the nearest planet, connecting you now with the outside view plate."

The screen went dark a moment later, the gray surface showed thousands of gleaming points, distant stars, and here and there were a few tiny discs. These, then, must be planets of this mighty sun. Rapidly one of them was growing, expanding. Soon it was an inch across; then it grew rapidly till the shining disc covered all the glowing screen. They had been approaching at 2000 miles a second, but they slowed down to the more moderate pace of 100 miles per second.

Now they saw a strangely glowing light coming up from the planet below. It seemed to approach quickly—then the screen went blank, to be lighted a moment later by the scene within the ship. There was a rapid but efficient scene of action. The commander stepped up to the view plate. Just as he began to speak, the screen went gray, the image blurred, then cleared for a moment; there was an expression of sudden astonishment and surprise on the face of the young commander—then again the screen was dark.

Three hours they waited, but

there was no sign from the far-off ship. Silently the men filed out. But day and night that screen was watched. It was late in the evening of the second day that they were at last rewarded for their vigilance. The screen was suddenly shot over with a streak of brilliant red; it glowed green, then went dully gray. A few minutes later it was again illumined but now the gray field resolved itself into distorted images; men seemed working frantically over the instrument, then the queer chirping sounds of the voices suddenly underwent a change. The screen cleared; then sharp and distinct came the words across the void and the picture of that far-off scene. They were looking from the top of a great rugged cliff of sharp rock such as no living man had ever seen, and the scene beyond was even more strange to their eyes! Great wooded hills rolled off into the distance, and over the carpet of bright green was flung a marvelous canopy of blue, in which there was set a wondrous jewel that flamed blue in majestic splendor. As large as the sun from Mercury it was, but so bright one could not look at it. And in the far distance there rolled a mighty ocean of sparkling water. Such a scene no living eye had ever seen, save in the ancient records, where there were shown the great space flyers hanging over mighty stretches of such

water. But in the center of the field was that which riveted the attention of all. There they could see the twisted wreck of the mighty flyer. The great beams were bent and torn apart, the instruments and machinery were wrecked, and to one side there was a great pit that the machinery had blasted in the soil before it was shut off.

The projector now showed the members of the crew of the ship working busily at the makeshift apparatus. They were using hand disintegrators for power supplies. The apparatus was that which they could salvage from the wreck, and faulty. Frequently as they watched they would see the connections arc across, the scene would fade, then come back as quick work repaired the connection. The disintegrator power units were much overloaded and heated so badly that they had to run them in relays. They could not attach more; there was insufficient cable.

"Sir, we were attacked by hundreds of strange beings. They seemed pools of force, living, sentient beings, but the electronic-activity indicators indicated a frequency that denotes atomic forces. I believe they are beings living on atomic energy. They have no material body. Heat rays do not affect them in the least. They shed disintegration rays as a repulsor screen does meteorites.

They are unaffected by our most powerful explosives. They have tremendous power. One of them took our space ship and threw it violently away with so terrific an acceleration that the neutralizer was damaged overcoming it. We tried to flee from them, but they seem to be able to go with a speed approaching that of light, and easily overtook us. Finally they forced us near this, the sixth of the ten planets, and threw us down. The machine was wrecked, but the neutralizer, crippled as it was, saved us. The matter disintegrator was broken open, and the power ray tore up the ground a bit. The atomic creatures are hunting us, I believe—they are—there they come—they can blanket our power somehow—”

The screen went gray-black. Never again did they hear from that expedition. But that voice across the void had served as a warning to those that followed.

It was scarcely a month later that a second expedition of ten ships was projected, one after the other, across the infinite void. These ships were fully armed, but they had come to investigate, not to fight. The enemy seemed to have some strange weapon that they could control from a distance; it was a weapon not inconceivable to these people, merely one unknown. That the Things were in truth living beings was

incredible; it was the terrible shock of the sudden attack that must have made the men engender any such strange belief. But the expedition now on its way would solve the problem, no doubt. Again came that silent meeting in Hal Jus's great domed laboratory. The greatest men of the System had assembled; they were being called in, in consultation, to examine the weapon of the enemy. Hanlos Tonn, the System's greatest Moleculist, as they called chemists, was there. Tal Nos, the genius of Physics, and Tornok Lor, the great Atomist, and the greatest specialists in every line were present at that conference.

And now before them the great screens glowed mistily. Then slowly they cleared to show in gray outline the interior of the far-off ships. Each ship was represented by a great screen. And now, as the ship gained solidity, the screens cleared, the images became sharp and strong, color filled them out with greater detail. Then slowly the men stirred. They moved with returning consciousness, and took over the control of the ships from the automatic controls. One by one they reported back to headquarters. There were only forty-seven seconds delay in the time of transmission of signals now, so they maintained two-way communication.

The outside projectors were switched on and the fleet fell into a small cone formation. With the flagship in the lead, they set out to investigate the planets from a distance. The electroscope on the flagship should permit them to make fairly close surface examinations from a safe distance.

Ten planets they found circling the mighty star.

Three of the planets would be directly habitable for man. But on none did they find the great cities they had expected to see. They only saw strange globes of lambent fire darting about. From planet to planet they went, the red glow lighting a great sphere twenty feet in diameter, but for a hundred feet about it the air glowed purple under the ionizing force of some stranger radiation. When they moved, they were shooting comets, with brilliantly glowing heads of red and long tails of blue. But they seemed to live on all the planets. Even in the blazing minor star they lived, darting in and coming out of its flames as unconcerned as a Solarian ship would dart in or out of an atmosphere. Could it be that those men had spoken the truth? It seemed incredible—impossible—but these men had learned millions of years ago that nothing is impossible, and were ready to credit anything if they had reason to believe it so.

For two days those great ships

wheeled above the planets, deep in space, undetected. Then one of the glowing Force beings passed close—a scant ten thousand miles away, and through the electroscope, and by means of the electronic activity meters, by spectroscope and pyrometer, by all the complex instruments of their age, they studied him. And the result was conclusive. They were living, sentient beings—Force creatures, conscious pools of titanic energies, forces so great they lived by, that no material body could serve them, and their limbs were the forces that nature had given them. Those forces, which man had spent thousands of years in discovering, a kind nature had given these beings. But in return she seemed to have decided that they needed no brains, for they possess no intelligence. Had man waited another billion years, there might have been intelligence developed in these strange creatures. What an intelligence it would have been—an intelligence based on forces of atomic nature!

But they too had been discovered. In some strange way the creature had sensed them, and sent a call to his friends, for across all the system they could see the strange creatures racing at a velocity that could not be much short of that of light, for while the men were material, and as such could not travel at that

speed, the force beings, by their very natures akin to light, could very probably attain to that motion.

The battle was on. At first the force beings hung in a sphere, a three-dimensional cordon, about the ships, then suddenly their lambent red glowed more strongly, and the screens in the far-off laboratory went dark. They had in some way prevented the transmission of further messages. The men at once formed the ships in a great tube, with the one scanner ship in the center, and then one by one they dropped out and were sent across the void—back to the Sun.

Then one of the watching creatures darted forward, toward one of the great ships hanging there in space. As he came within range a disintegration ray flashed out, touched him, and was shed from him in great leaping sparks as the energy was met and opposed. A heat ray leaped forth—the creature paid no attention to that, did not even bother to oppose it—only circled closer. A stream of explosive bullets were launched at it, but they affected it no more than the heat ray. It seemed hopeless. And now the creature hung there, and suddenly he underwent a strange change. In the glowing center of his strange force-pool there suddenly appeared a strange nucleus of

glowing violet light, a nucleus that spread throughout the twenty-foot sphere of lambent red force. But it was shot through by strange streamers of waving angry red. Then these strange streamers of fiery red seemed to condense to two main streamers that reached out and out—and touched the great ship. There was a blinding flash of red light—and in place of the great ship there floated a slow cloud of fine, fine dust that glowed softly in the light of the blazing sun. Then the strange streamers seemed to contract, to lessen, and with them the strange purple light from the creature. Slowly, gently he floated away. Of the fleet of ten great ships, and the accompanying matter sender, six ships returned. The rest floated out there in the interplanetary space around Betelgeuse.

The men of the system had data to work on, but a great deal of work was yet to be done. They must find some way to destroy these pools of force. Only forces could affect them, and they must find one that was fatal to them. Only ten short years remained to them, so, although no weapon had been developed, a great battle fleet was started, that the ships might be ready when at last the weapon was developed.

And on all the worlds great works were to be done. The records of a civilization ten thousand

thousand thousand years old must be collected and prepared for their journey across the void. The exhibits from museums, ages old, must be packed with tenderest care. They had strange exhibits there of the first beginnings of civilization, tools and weapons of savage man, strange things that killed or injured by throwing small bits of metallic matter at the enemy. Strange clumsy vehicles they had, made of metals that corroded so rapidly as to fall to pieces in a brief 1,000 years or so, unless they were preserved in an atmosphere of argon and driven by great clumsy engines tapping the slight energy of molecules with an efficiency of hardly 10 per cent. Other machines that had been intended to drag man through the air, not supported by forces, but held up by air! Then came the first ancient anti-gravitators; then the swifter machines propelled by the energy of matter.

Exhibits unutterably ancient they had, and these must be sent across all that void. Invaluable archives they were.

But with them must go their own great machines, mighty mechanisms for producing their foods, for making their ships; the thousand and one things that went to make up the great structure of their age-old civilization. And huge sending stations of inconceivable power had to be

erected to transmit them. Titanic projectors capable of sending a machine weighing a quarter of a million tons in one scanning. Other machines were so huge that they must be cut into sections and sent in pieces.

A greater work—a quieter, invisible work—was being done by tireless workers in the laboratories. Fifty-three hours a day they worked in the great government laboratories on Earth. On Venus the shorter day made shorter hours desirable. But steadily the scientists were working on their problem. At last the Minus Energy was developed. They were to try it out before equipping the entire fleet with it. At last ten ships were equipped and sent with a scanner machine to Betelguese.

Now they courted an encounter with the Force Giants. They were soon satisfied, for thousands of them came at terrific speed the moment they attacked one. That first one had floated into range as they threw a searchlight on it; then, as it began to color with the deadly violet and red destruction, a tiny projectile was launched at it. Not more than six inches long by two in diameter it raced at its target at nearly a thousand miles a second. It was carefully followed by the anxious watchers at the ship's electrosopes — it reached the floating Thing—

hesitated briefly, and exploded.

But perhaps you or I would not have termed that action explosive. That little projectile contained several pounds of half-destroyed matter. It had been used as a fuel in an industrial plant, till it had been about half annihilated, and now it was in that curious borderline condition, when it had a tremendous tendency to absorb energy and become matter again, and an equally tremendous tendency to release its energy and become free energy as light or heat. The conditions determined one or the other, and the new Minus Force shells were used under conditions of space that made them exert a tremendous tendency to become matter. Billions of billions of ergs of energy they could absorb, and would absorb. They drew it from all the surrounding ether so rapidly that it had the effect on all surrounding substance or sources of energy of being in contact with something at a temperature far below absolute zero. The result was obvious. When it was set off, all light, heat, or any other energy within a region of ten miles or so, was instantly drawn to it, until it had been satisfied. It was an energy vacuum shell.

That first Atomic Giant did not last long enough to warn the others. It was an entirely unexpected form of attack, and when the light of the mighty sun could

once more be seen through the spot where the Minus Force had been sent, the Atomic Creature was not there, all its great forces had been drained from it. And, being only a pool of force, it vanished.

But now there came from all directions great streams of the Atomic Giants. They seemed to suddenly appear close at hand, apparently coming from nowhere. They traveled as fast as light, therefore they reached them as soon as the light, so that their approach was invisible. Only when they slowed down could they be seen. And now from each ship came steady streams of these Minus Force shells. Thousands of the energy-absorbing projectiles flew in amongst the massed attackers—and many of them took effect, drawing the energy from the great creatures, destroying them utterly. The weapon was a success! They fired a second volley when others of the creatures came within sighting range—but they did not affect the Atomic Giants this time. Great dark patches appeared, but the creatures that had been there before, were there now, as powerful as ever, quite uninjured! What did it mean?

They did not know. They only knew that the enraged creatures were closing in on them, closer and closer—and now the ships were being sent back to the sys-

tem as rapidly as possible—one—two — three — four — but more could not get through—the others were cornered, marooned in infinity by the destruction of the sender. The Force Creatures, utterly immune to the Minus Force shells attacked unchecked, gripped it with strange forces, limbs, hands or gripping force, that tore through the foot-thick alloy like so much tissue paper, metal, which was fifty times as strong as our frail steel, a metal whose molecules had been designed by the scientists of the race millions of years ago, and in all those ages no stronger, more inert metal had ever been found. But now that tough envelope was torn open, for the forces of atoms were greater than the forces of molecules, and the creatures used those forces.

But those marooned ships were lost—destroyed soon by the vengeful giants. And the forces of man on the far-off planets of a far-off sun were worried anew. Their weapon was a failure after all. Some new thing must be developed. But how did it happen that the first attempts were successful? The scientists believed it was due to the fact that the first attempts were utter surprises to the creatures—they were taken before they could prevent the loss of their energy. In some way they were able to build a barrier about themselves that prevent the loss

of energy, even as it prevented the penetration of the energy of the disintegration ray.

But man must develop some new, some stronger weapon. The time was getting too short for more failures. For Hal Jus had announced a discovery that made men even more anxious to abandon their age-old home. The Sun was to become a nova. These flaming stars had been known and studied for ages. Dim, old stars they were that suddenly flared up for a brief period of intense activity, then quickly faded back even lower than before. It behooved man to move quickly. A mighty people that for ten billion years had slowly built up the mighty structure of their science had to move.

Many weapons were tried, many expeditions of two or three ships made the trip, and attempted to destroy the creatures. Some succeeded moderately well, others met with ghastly failure.

Two brief years now remained to them. Expeditions to many of the younger stars within range of their great projectors were made, but always they brought back bad news. Here they found no habitable planets; there the sun had not yet developed planets, and there was no time to stop to make and cool off a planet. That would require a century, even for one as small as Mercury. They must migrate to Betelgeuse. But Tor-



alk, the mighty sun without planets, was kept in mind. If necessary, they could make the planet, and while it cooled, float in space, living in their mighty ships, making air and food and all their needs from matter torn from the sun. The great battle fleet of thirty thousand ships was ready. Each ship, two thousand one hundred

feet long and three hundred feet beam, was ready to start. They merely awaited the hoped-for weapon.

At last it was discovered. Another of the test trips was made. Three small ships went, and one sender, that they might return.

In the depths of space they were re-integrated, and now they

slowly proceeded to the blazing star before them, then hovered near one of the circling planets. In a moment they were discovered, and literally thousands of the glowing creatures darted up from the green, brightly lighted world below. These creatures had learned that these ships were hostile and as they drew near, they were already changing to that fatal violet, streaked with red. Great flaming streamers of force reached out to the ships, but in that instant the ships suddenly seemed to shimmer, as an object seen through heated air, and around them there was a strange, pale radiance, a radiance that seemed to have substance. It seemed to flow, to move, yet always remained as a strange, half-visible, milky shroud, that surrounded the ships. And then the streamer of glowing death reached out—touched it—and disappeared! The creatures leaped back, as though in pain, writhing away. The usual color of the creature was suffused by a pale, but growing green—then as the red was more and more overcome by the rising green, the glowing shape grew misty—then like a puff of vapor before a breeze it was gone—the great Atomic Giant had been mortally wounded and before their eyes, had died. Instantaneous dissolution had taken place.

The others held back in fear.

There was something new to combat and they went cautiously. Now there leapt out from the nose of the ship a long beam of the milky, glowing ray—it touched one of the great creatures—there was a slight flash of light—and it was gone. Then the glowing ray swept around and erased those forms there in space, erased them as one might wipe the image from the screen with the flick of the switch. And then, precipitately they fled. They were beaten; they could not attack this new ship.

Across the void it was sent, while the few men left in the ray machine awaited the coming of the mighty battle fleet that would soon be ready. Around them glowed a pale, scarcely visible field of light. Defenseless they seemed as they lived and slept in the car swinging in its orbit about the blazing sun, but many of the Atomic Giants found the mighty strength that lay hidden in that thin wall of scarcely visible vibration. And constantly the men were observing the planets and communicating the data to the leaders on Earth and Venus.

And in the System wild activity was going on. The entire force of the machines of all the planets was concentrated on the production of the great generators of this new force. It was simple in principle. The Atomic Giants

lived by using as their "fuel" the energy of the atoms. We live by burning the carbon and hydrogen of our foods with the oxygen of the air. If the supply of either oxygen or food were cut off, the incombustibility results and we die. If oxygen is cut off, we die because the carbon compounds will no longer burn. If food is cut off, we die because there is nothing to consume the oxygen with.

The Atomic Giants needed no oxygen or carbon—any element would do. But they needed elements that they could decompose for their energy. Any atom under normal conditions would do, but if that atom was made incombustible they too died. This new force that was so deadly to them, was a force created by the energy of matter. The electrons of matter were altered by the application of terrific spatial strains, and they would no longer react in the same way and would not decompose as did the normal electron. They merely prevented the use of atomic energy wherever they were. Thus the "fuel" of the Atomic Giants was made incombustible and they died.

But there was a tremendous amount of work to be done before they could be ready for the great offensive to be carried across space. The great ships were rapidly being equipped with the electron projectors and assembled in

long rows outside the great transmitting stations, awaiting the final start.

It was nearly two weeks before the great fleet was ready. Then they were all assembled, ready to start. The control ship went first. Since the cessation of the release of atomic energy did not affect the release of material energy, they did not have to worry for the safety of the men when projected out into space. They would regain consciousness soon enough, and the wonderful automatic devices that ran the complex mechanism would hold it in place, maintain its temperature and the distance of the one ship from the other. The protective shield of the strained electrons would protect them.

In the darkened observatory on Venus, many men were watching in silence. The room was absolutely silent; only the smooth, gentle hum of the smoothly operating news-casters marred the utter quiet. They had come to observe, not to comment, and they waited quietly.

There was a flash of light on the screen and the image became clear and sharp. They seemed to be in a huge room, the walls were lined with small electrovision boards, tier above tier of balconies ran around the sides of the great room, and in the center rose a mighty cylinder. The entire wall area of the great room

was covered with the projectors, and before each one sat a man. But the mighty cylinder in the center was carefully walled off. Now, as they watched it, it suddenly glowed faintly bluish—the air about it was being ionized—there arose a faint, deep hum; then there appeared about it an intense corona of air, ionized under the titanic forces within it—tiny shooting sparks crackled blue over all its polished surface—

The view faded; another replaced it. Now they seemed to be in a smaller room, a room whose front wall was lined with a series of large view boards. Twenty of these boards there were, and on each was the image of a room whose metal walls glistened in the light of the dull red sun. They were looking into the operating room of the greatest of the ships—the flagship. This ship, unlike the others, was a cube, surmounted by a smaller cube control-top. The mighty cylinder inside generated a field that surrounded all the ship with the protecting force, but triply intense. The fighting machines were two thousand one hundred feet long, and three hundred beam. These carried powerful protective force generators, but also they carried fourteen sets of the projectors, three along each side, the top and the bottom, and one at each end. Inside, the terrific energy needed to operate these was being generated in

smoothly humming machines. Titanic they loomed above the tiny men tending them. These same giant machines would, later, with a few simple adjustments, furnish the power for the receiver machines to receive the things from the Solar System. But now they were engines of war. Over each thousand of these great ships was a division leader. The twenty division leaders were represented by the twenty view boards in the flagship. The individual ships were each represented by one of the boards in the central control room, so that in any case they knew the fate of every ship, and aid could be sent them.

Now the scene on Hal Jus's screen became misty—the ship was being sent into space. It would be close to an hour before the scene reappeared. Now they shifted the adjustment to watch the sending of the armada of space.

With the many stations in operation, the work went along smoothly and within two hours all were there. The twenty thousand ships had automatically assumed the formation of a mighty cone; the three dimensional equivalent of the flying wedge of their remote ancestors.

Gradually now the men within were awakening. The scene in the control room shifted to the flagship's engine room, as clicking relays shifted the connection to

another viewplate on the distant ship. The mighty engines loomed huge above the tiny cots of the sleeping engineers. Here too was the mighty cylinder, but now it was seen as the core of a gigantic coil, into which ran great cables from huge, soft-purring generators. Even the forces of material energy required straining to operate that great electron distorter.

Hal Jus pushed another button. Again the tiny relays out in space reconnected him. The commander was awake. The control room was soon a scene of the greatest activity. As soon as the necessary weapon had been discovered, the plans for the great action had been sketched. The formations were rapidly being worked out.

The great fleet was divided into ten parts of two thousand each, and to each of the nine smaller, cool planets one of the ten divisions went. The tenth stayed as a guard to the flagship. Now they went in ten great cones of glistening ships, a mighty armada of space, coming across the void to conquer the new universe for Mankind. And now they separated as they drew closer to the System, for the ships had been re-formed nearly four billion miles from the central sun, Betelgeuse.

The expeditions swept along over and close to the surface of the planets they had been sent

to investigate. Heat, cold, size, made no difference to the Atomic Creatures and all the small planets would be taken first. The smaller planets would be attacked first. The creatures would probably flee to the outer planet, but it was necessary to plan to attack them there.

Low over the sunlit surface of a great planet they were swinging; below them there rapidly unrolled a terrain of mighty forests of green trees, vast green meadows of gently rolling land, and all bathed in the blinding glory of a blazing white sun. What a scene for eyes that had been starved of light for countless years! What a land of hope and promise and pleasure it seemed to these small gentle men. For generations the only plants they had seen were the poor small things raised artificially in the museums. Here they saw magnificent trees that towered two hundred feet into the air, in wondrous profusion of leafy green.

Now they were swinging over mighty oceans, gigantic patches of water that were larger enough to cover all the surface of their smaller globes, for this planet was large as the long gone Neptune, or Uranus. How wonderful those vast areas of magnificent blue water, sparkling brilliantly in the light of the gigantic sun seemed to them. Each man, before he started on this expedition, had his

eyes treated that the new light would not be too bright and that it might appear white to him, so that now they could fully appreciate the wondrous beauty of the scene beneath.

And wondrous it was to men who had never seen water except as it had been manufactured in their great plants for community use. No oceans, no rivers, no lakes had there been in their system for over five billion years.

Now they were following a mighty river, a river larger than any that Earth had ever seen, for it drained a vast area of a humid planet. Yet it was a new planet, with mighty mountain ranges, mountains that towered in mighty snowcapped peaks in the blue distance, over wide ranges of green forest! What a sight it was for the eyes of these men! What a wondrous country! And now, as they rounded the bend in the great river, they cried out in excited wonder, for before them the great river, vaster than three Amazons was pouring over a mighty ledge of rock, nearly four hundred feet in height; and from it rose a tremendous wave of sound that made the great ships tremble with the force of it, as they slowed to a few hundred miles an hour to watch the gigantic cascade. Then on again—There was much to do ere they could claim this beautiful country.

And on a low ridge among the mighty mountains they came upon a grim reminder that it was not theirs yet. A great hole lay carved out in bare soil—a sharp contrast with the rich green of the country. Here and there they saw scattered brightly shining bits of metal and a section of heavy metal armor plate, torn and twisted by some enormous strain. To one side lay a heavy girder, torn and bent into a U. They recognized the spot whence the voice of the lost expedition had come across the void to them. Careful electroscopic and photographic studies of the spot were made before they moved on.

The Atomic Creatures feared them now, it seemed, for though they had come even to one of the planets, they had seen none of the enemy. Surely there must be many hiding!

On the other side of the great mountain range they found their answer. Here, too, was a vast area of green, rolling meadow, but far out across it they could see a great bare spot, where only the dark, raw soil was visible. They swung the armada toward it and shot forward to investigate, but before they had come within a thousand miles of the spot there suddenly appeared as from nowhere an army of the Atomic Giants. No doubt this bare spot was their home, and from the great area it seemed that they

must inhabit it in great numbers. The powerful radioactive effects of their forcefields no doubt killed every plant.

These creatures were not entirely defenseless, for if their numbers were great enough they could exert a powerful interfering force and break down the protective field. But they knew that many would be required. And now all in an instant the battle for this world was on, the great creatures striving to destroy the ships, while burning rays of milky radiance stabbed and slashed at their strange glowing force-pools. Soon they found the vulnerable point of the ships and began to attack single ships in numbers. Slowly, slowly the milky radiance would contract, while the smooth purring of the mighty generators rose to a throaty hum, then became a vicious snarling roar. The great electron distorter cylinder would become a mass of shooting sparks, crackling, snapping till the atmosphere about it was alive with twisting streamers of flame twelve to twenty-four inches long. Then slowly it would heat—and if the attack was still unbroken, there would be a queer sighing hum from the generator, and a slight explosion—and the ship was gone. The generators, however, would withstand the attacks of ten or eleven of the creatures safely, and the other ships would come to the rescue — but many

times there were no free ships in the neighborhood, and all available power must be turned into the ray generators, the slashing beams cutting at the many opponents. Even the propulsion apparatus was robbed of energy that every last meg-erg might be fed into the ray generators. Thousands of the Atomic Giants were destroyed, their color turning that strange green, then they suddenly were snuffed out. But sixty-two ships were lost. Still many remained when at last the Atomic enemy fled suddenly into space. There was no way of following their motion, they merely disappeared, going off with the speed of light. Then the visitors explored all that world, and nowhere did they find any more creatures.

But now the reports from all the other planets were coming in, and in every case eventual victory was secured. On two planets the issue was for a time in doubt, for there seemed to be great centers of the creatures here. However, there was no difficulty in discovering where the remnant had fled to! The electronic activity readings of the outermost planet, the minor sun, had risen 12.5 per cent. Since a star does depend on atomic energy it was easy to see that the creatures had sought refuge here. The range of the present ray was too short to permit attack on that planet. The blazing furnace drove

them back to a distance of a million miles as the least distance of safe approach. They could not attack the creatures here. What could they do? They must exterminate them before the people moved to their new planets, for the creatures could make a raid, destroy a city, and be gone before the battleships could leave their docks.

The control ship proceeded directly to the most pleasant of the planets, with its guard, and the other ships were sent to watch the planets lest the Atomic Creatures return. Then on the planet the men began to set up one of the great receiving stations. From the sides of the ships ran mighty power cables to the powerful station. Then across space there came expert engineers, workmen, instruments and tools, working machines, constructor robots, and then great pieces of machinery so huge they could send only one section at a time. With these a new station was built to replace the temporary one.

Already a small city was developing it seemed. But back on the old planets, mighty works were being undertaken. They were building two thousand ships, the biggest ships that had ever been built. Millions of tons they weighed, and each ship was one vast power plant. Down through the heart of it ran a mighty cylinder of glistening me-

tal. A tiny control room, invisible among the titanic machines, governed all its vast energies. It was a gargantuan projector of the nullifying field, a mighty ship that could hurl its energies into space to form a field of the force that could reach out across a million and a half miles. Two thousand of these vast machines were being built. Gigantic power plants they were. But these peacefully minded men designed them so that, their work done, they could be easily converted into merchant cargo ships, and the mighty generators could be used to light and heat their cities.

In less than two weeks the great ships were ready, and were resting on the surface of the great world out there across space, ready for the attack. The last mighty form had but just floated, light as a feather from the huge receiving station, and now they lay in a row. So vast they were that they seemed unreal, figments of some strange dream. Mighty cigar-shaped hulls of four-foot armor plate, half sunken in slight depressions they lay now, their terrific weight making the soil flow like some semi-liquid mass. Nestled between two of the gargantuan ships there rested the control ship. Now, one by one the fleet of the mighty bulks rose gently, gracefully into the air, formed in a perfect cone, with the control ship scarcely vis-

ible in this congregation of giants, following behind the leading ship.

Out to that minor sun they flashed, and around it they formed a great sphere of ships. Then each of the mighty projectors, nose pointing to the blazing sun below, turned loose its powers. Through special filters they could watch the field forming. First it was a thin shell that surrounded the entire planet as the projectors threw it into position. Ten thousand small ships were occupied in maintaining the field of electrons in place with their projectors. Already the shell of force was thick and strong. Unless the Force Creatures made a concerted effort at some one point, they would soon be doomed.

They did this. There must have been many, many thousands of them. The field was almost broken, it was bulging out, scattering under the drive of their energies. Soon they would have broken through, but one of the great projector ships reached the spot before the field had quite yielded, and condensing his field projector till it was a ray, they could see the field suddenly fall in, driven in by the awful power of that titanic driving.

It took them sixty-three hours to completely establish that mighty energy field. Naturally the star, which made no use of Atomic energy, was quite unaffected. But when, at the end of

three weeks, the energy field had slowly dissipated itself into space, there were no more of the Atomic Giants.

Now the four habitable planets were at once settled upon. Already they had been carefully mapped, and the Supreme Council had drawn up a plan for the use of the vast planets. More area there was than they needed now, by far, so the cities were scattered widely over the globes. Mere planetary distances meant nothing to them. And all the areas between were carefully preserved as vast, natural parks. Through them wound roads for the little ground cars, so that the people might better see the beauties of the place. And some of the harmless animals would be permitted to live that the future population might know them. It was to be the fulfillment of a millennium-old dream—a warm, sunlight world, a kindly, young world where nature supplied the air, and the water, and the warmth in great abundance.

It was a kindly nature they seemed to have met here. And the work began.

Dozens, hundreds of the great receiver stations were set up. And at each station there would grow a great city. Now there poured across the infinite void a mighty influx of machines and workers and tools. These were the first, for they must build the cities for the

billions to come. Rapidly the work went on as the skilled artisans directed the mighty machines in their labors, and on the surface of this new globe there rose from the ground mighty walls of lustrous, gleaming metal, reflecting the sun in a million different colors, a wondrous city of flashing, changing light, for the metal walls were automatically ruled with thousands of lines to the inch, a titanic diffraction grating that sent up a rainbow of changing, flashing color. A mile and a half into the air towered the buildings of the cities, and already the commerce was building up as the great receiver stations discharged their steady stream of immigrants.

One and a half years it took them to move all their treasures and priceless records, all their goods, all their machines and themselves across the void into their new cities. One and a half years of swift, efficient labor that transformed these new worlds into civilized planets.

But now they had twenty billion years to live ere these planets, too, would be dark, cold and sunless. And then they could easily move to some other distant system. But why wait till the Sun grew cold? They were already making investigations. Out across space there still glowed countless millions of unexplored stars! Now there would be no population

limit to their peoples; there would be expansion, and since each man lived from two to three thousand years, the expansion could be rapid.

Four of the planets were naturally habitable, but five there were which should be so in the future. There was one yet a glowing planet, still hot from its formation. Two were so far from the major sun that they were cold to absolute zero, save when they were in conjunction with the minor sun. These the engineers and astro-physicists had investigated. They would be drawn nearer the sun when the population warranted, and one more that turned on its axis but once a year could easily be started rotating. Air and water it lacked, but that would be easy to supply. And a last planet was so close to the mighty blazing Betelguese that it was kept dull red by the titanic furnace so near it, a scant thirty million milles away. That would be drawn to a more comfortable distance. There was indeed room for much expansion in this system.

But still there was the urge of exploration, of adventure. There might be other battles to fight, other worlds to conquer! Already mighty exploration ships were being prepared to dispatch to half a dozen systems. Perhaps they would bring commerce; perhaps it would be wider domain. But it was that same lure of adventure

that had driven the first caveman from his rocky cliff to explore the wilder lands. It was the love of adventure, another name for

ambition. It would take more than ten thousand thousand years to kill that!

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THE GONE DOGS

By FRANK HERBERT

A grim little yarn—by the author of *Dune* and *The Dragon in the Sea*—in which an Earth biologist is hunted by the police simply because he dared to give some puppy dogs to an alien bio-physicist from Vega. Of course—as it turned out—those pups just happened to be the last dogs on Earth!

A GREEN turbo-copter moved over the New Mexico sand flats, its rotor blades going whik-whik-whik. Evening sunlight cast deep shadows ahead of it where the ground shelved away to a river canyon. The 'copter settled to a rock outcropping, a hatch popped open and a steel cage containing one female coyote was thrown out. The cage door fell away. In one jump, the animal was out of its prison and running. It whisked over the outcropping, leaped down to a ledge along the canyon wall and was out of sight around a bend—in its blood a mutated virus which had started with hog cholera.

The lab had a sharp chemical odor in which could be detected iodoform and ether. Under it was that musky, wet-fur smell found in the pres-

ence of caged animals. A despondent fox terrier sulked in a cage at one end; the remains of a poodle were stretched on a dissecting board atop a central bench, a tag on its leg labelled X-8, *PULLMAN VETERINARY RESEARCH CENTER, LABORATORY E*. Indirect lighting touched everything with a shadowless indifference.

Biologist Varley Trent, a lanky, dark-haired man with angular features, put his scalpel in a tray beside the poodle, stepped back, looked across at Dr. Walter Han-Meers, professor of veterinary medicine. The professor was a plump, sandy-haired Chinese-Dutchman with the smooth-skinned look of an Oriental idol. He stood beside the dissecting bench, staring at the poodle.

"Another failure," said Trent. "Each one of these I

autopsy, I say to myself we're that much closer to the last dog on Earth."

The professor nodded. "Came down to give you the latest. Don't see how it helps us, but for what it's worth, this virus started in coyote."

"Coyote?"

Professor Han-Meers found a lab stool, pulled it up, sat down. "Yes. Ranch hand in New Mexico broke it. Talked to the authorities. His boss, a fellow named Porter Durkin, is a V.M.D., has a veterinary hospital on a ranch down there. Used a radioactive carbon egg to mutate hog cholera. Hoped to make a name for himself, killing off all the coyotes. Made a name for himself all right. Government had to move in troops to keep him from being lynched."

Trent ran a hand through his hair. "Didn't the fool realize his disease would spread to other canines?"

"Apparently didn't even think of it. He has a license from one of those little hog-wallow colleges, but I don't see how anyone that stupid could make the grade."

"How about the coyote?"

"Oh, that was a great success. Sheep ranchers say they haven't lost an animal to coyotes in over a month. Only things worrying them now

are bears, cougars and the lack of dogs to . . ."

"Speaking of dogs," said Trent, "we're going to need more test animals here by tomorrow. Serum nine isn't doing a thing for that fox terrier. He'll die tonight sometime."

"We'll have lots of test animals by tomorrow," said Han-Meers. "The last two dog isolation preserves in Canada reported primary infestations this morning."

Trent drummed his fingers on the bench top. "What's the government doing about the offer from the Vegan biophysicists?"

Han-Meers shrugged. "We are still turning them down. The Vegans are holding out for full control of the project. You know their reputation for bio-physical alterations. They might be able to save our dogs for us, but what we'd get back wouldn't be a dog any longer. It'd be some elongated, multi-legged, scaly-tailed monstrosity. I wish I knew why they went in for those fish-tail types."

"Linked gene," said Trent. "Intelligence factor coupled. They use their *mikeses* generators to open up the gene pairs and . . ."

"That's right," said Han-

Meers. "You studied with them. What's the name of that Vegan you're always talking about?"

"Ger (whistle) Anso-Anso."

"That's the one. Isn't he on Earth with the Vegan delegation?"

Trent nodded. "I met him at the Quebec conference ten years ago—the year before we made the bio-physical survey to Vega. He's really a nice fellow once you get to know him."

"Not for me." Han-Meers shook his head. "They're too tall and disdainful. Make me feel inferior. Always harping about their damned *mikeses* generators and what they can do in bio-physics."

"They can do it, too."

"That's what makes them so damned irritating!"

Trent laughed. "If it'll make you feel any better, the Vegans may be all puffed up with pride about their bio-physics, but they're jealous as all git-out over our tool facility."

"Hmmmph!" said Han-Meers.

"I still think we should send them dogs for experimental purposes," said Trent. "The Lord knows we're not going to have any dogs left

pretty soon at the rate we're going."

"We won't send them a sick spaniel as long as Gilberto Nathal is in the Federated Senate," said Han-Meers. "Every time the subject comes up, he jumps to his feet and hollers about the pride of Earth and the out-worlдер threat."

"But . . ."

"It hasn't been too long since the Denebian campaign," said Han-Meers.

Trent wet his lips with his tongue. "Mmmmm, hmmm. How are the other research centers coming?"

"Same as we are. The morning report shows a lot of words which sum up to a big round zero." Han-Meers reached into his pocket, extracted a yellow sheet of paper. "Here, you may as well see this. It'll be out pretty soon, anyway." He thrust the paper into Trent's hand.

Trent glanced at the heading:

BUREAU-GRAM — DEPARTMENT OF HEALTH AND SANITATION — PRIMARY SECRET:

He looked up at Han-Meers.

"Read it," said the professor.

Trent looked back to the *bureau-gram*. "Department doctors today confirmed that

Virus D-D which is attacking the world's canines is one-hundred percent fatal. In spite of all quarantine precautions it is spreading. The virus shows kinship to hog cholera, but will thrive in a solution of protomycetin strong enough to kill any other virus on the list. It shows ability to become dormant and anerobic. Unless a suitable weapon with which to combat this disease is found within two more months, Earth is in danger of losing its entire population of wolves, dogs, foxes, coyote . . ."

Trent looked back to Han-Meers. "We've all suspected it was this bad, but . . ." He tapped the *bureau-gram*.

Han-Meers slipped the paper from Trent's grasp. "Varley, you held out on the census takers when they came around counting dogs, didn't you?"

Trent pursed his lips. "What makes you say a thing like that?"

"Varley, I wouldn't turn you over to the police. I am suggesting you contact your Vegan and give him your dogs."

Trent took a deep breath. "I gave him five puppies last week."

A Capital correspondent for a news service had broken the story six weeks previously, following up a leak in the Health and Sanitation Committee of the Federated Senate. A new virus was attacking the world's canine population and no means of fighting it was known. People already realized their pets were dying off in droves. The news story was enough to cause a panic. Interstellar passenger space disappeared. Powerful men exerted influence for themselves and friends. People ran every which way with their pets, hopelessly tangling inter-world quarantine restrictions. And the inevitable rackets appeared.

*SPECIAL CHARTER
SHIP TO PLANETS OF AL-
DEBARAN. STRICTEST
QUARANTINE REQUIRE-
MENTS. TRAINED AT-
TENDANTS TO GUARD
YOUR PETS IN TRANSIT.
PRICE: FIFTY THOUSAND
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The owners, of course, could not accompany their pets, shipping space being limited.

This racket was stopped when a Federation patrol ship ran into a strange meteor swarm beyond Pluto, stopped to map its course,

discovered the swarm was composed of the frozen bodies of dogs.

Eleven days after the virus story appeared, the Arcturian planets banned Terran dogs. The Arcturians knew dog-smuggling would begin and their people could profit.

Trent kept six part-beagle hounds in a servo-mech kennel at an Olympic Mountain hunting camp. They were at the camp when the government instituted its emergency census of dogs. Trent deliberately overlooked mentioning them.

Leaving Pullman at three o'clock the morning after he talked to Han-Meers, he put his jet-'copter on auto-pilot, slept until he reached Aberdeen.

The Aberdeen commander of the Federated Police was a graying, burn-scarred veteran of the Denebian campaign. His office was a square room overlooking the harbor. The walls were hung with out-world weapons, group photographs of officers and men. The commander stood up as Trent entered, waved him to a chair. "Makaroff's the name. What can I do for you?"

Trent introduced himself, sat down, explained that he

was a member of the Pullman research staff, that he had nine hounds—six adults and three puppies—at a mountain kennel.

The commander seated himself, grasped the arms of his chair, leaned back. "Why aren't they in one of the government preserves?"

Trent looked the man in the eyes. "Because I was convinced they'd be safer where they are and I was right. The preserves are infested. Yet my hounds are in perfect health. What's more, Commander, I've discovered that humans are carrying the disease. We . . ."

"You mean if I pet a dog that could kill it?"

"That's right."

The commander fell silent. Presently, he said, "So you disobeyed the quarantine act, eh?"

"Yes."

"I've done the same kind of thing myself on occasion," said the commander. "You see some stupid order given, you know it won't work; so you go against it. If you're wrong they throw the book at you; if you're right they pin a medal on you. I remember one time in the Denebian campaign when . . ."

"Could you put an air pa-

trol over my camp?" asked Trent.

The commander pulled at his chin. "Hounds, eh? Nothing better than a good hunting hound. Damned shame to see them die with all the rest." He paused. "Air patrol, eh? No humans?"

"We have two months to find an answer to this virus or there won't be another dog on earth," said Trent. "You see how important those dogs could be?"

"Bad as that, eh?" He pulled a vidi-phone to him. "Get me Perlan." He turned to Trent. "Where is your camp?"

Trent gave him the vectors. The commander scribbled them on a scratch pad.

A face came on the screen. "Yes, sir."

The commander turned back to the vidi-phone. "Perlan, I want a robotics air patrol—twenty-four-hour duty—over a hunting camp at," he glanced at the scratch pad, "vectors 8181-A and 0662-Y, Olympic West Slope. There's a kennel at the camp with nine hounds in it. No humans at all must contact those dogs." He wet his lips with his tongue. "A doctor has just told me that humans are carrying this Virus D-D thing."

When Trent landed at Pullman that afternoon he found Han-Meers waiting in Lab E. The professor sat on the same stool as though he had not moved in two days. His slant eyes contemplated the cage which had held the fox terrier. Now there was an air-dale in the enclosure. As Trent entered, Han-Meers turned.

"Varley, what is this the Aberdeen policeman tells the news services?"

Trent closed the lab door. *So the commandant had talked.*

"Flores Clinic was on the line twice today," said Han-Meers. "Want to know what we discovered that they overlooked. The policeman has perhaps made up a story?"

Trent shook his head. "No. I told him a hunch of mine was an actual fact. I had to get an air patrol over my hunting camp. Those hounds are in perfect health."

Han-Meers nodded. "They have been without such a convenience all summer. Now they have to have it."

"I've been afraid they were dead. After all, I raised those hounds from pups. We've hunted and . . ."

"I see. And tomorrow we tell everybody it was a big mistake. I had thought you

possessed more scientific integrity than that."

Trent hid his anger behind a passive face, slipped off his coat, donned a lab smock. "My dogs were isolated from humans all summer. We . . ."

"The Flores people have been thorough in their investigation," said Han-Meers. "They suspect we are trying to . . ."

"Not thorough enough." Trent opened a cupboard door, took out a bottle of green liquid. "Are you going to stay here and help or are you going to let me tackle this one alone?"

Han-Meers took off his coat, found an extra lab smock. "You are out on a thin limb, Varley." He turned, smiled. "But what a wonderful opportunity to give those M.D.'s a really big come-uppance."

At nine-sixteen the next morning, Trent dropped a glass beaker. It shattered on the tile floor and Trent's calm shattered with it. He cursed for two minutes.

"We are tired," said Han-Meers. "We will rest, come back to it later. I will put off the Flores people and the others today. There is still . . ."

"No." Trent shook his head. "We're going to take another

skin wash on me with Clarendon's Astringent."

"But we've already tried that twice and . . ."

"Once more," said Trent. "This time we'll add the synthetic dog blood *before* fractionating."

At ten-twenty-two, Han-Meers set the final test tube in a plastic diffraction rack, pressed a switch at its base. A small silver cobweb shimmered near the top of the tube.

"Ahhhhhhh!" said the professor.

They traced back. By noon they had the pattern: Dormant virus was carried in the human glands of perspiration, coming out through the pores—mostly in the palms of the hands—only under stress of emotion. Once out of the pores, the virus dried, became anerobic.

"If I hadn't dropped that beaker and become angry," said Trent.

"We would still be looking," added Han-Meers. "Devil of a one, this. Dormant and in minute quantity. That is why they missed it. Who tests an excited subject? They wait for him to become calm."

"Each man kills the thing he loves," quoted Trent.

"Should pay more attention to philosophers like Oscar

Wilde," said Han-Meers. "Now I will call the doctors, tell them of their error. They are not going to like a mere biologist showing them up."

"It was an accident," said Trent.

"An accident based on observation of your dogs," said Han-Meers. "It is, of course, not the first time such accidents have occurred to mere biologists. There was Pasteur. They had him stoned in the village streets for . . ."

"Pasteur was a chemist," said Trent curtly. He turned, put test tube and stand on a side bench. "We'll have to tell the authorities to set up robotics service for the remaining dogs. That may give us time to see this thing through."

"I will use your lab phone to call the doctors," said Han-Meers. "I cannot wait to hear that Flores' voice when . . ."

The phone rang. Han-Meers put it to his ear. "Yes. I am me . . . I mean, I am here. Yes, I will take the call." He waited. "Oh, hello, Dr. Flores. I was just about to . . ." Han-Meers fell silent, listened. "Oh, you did?" His voice was flat. "Yes, that agrees with our findings. Yes, through the pores of the hands mostly. We were waiting to confirm it, to be certain . . . Yes, by our Dr.

Trent. He's a biologist on the staff here. I believe some of your people were his students. Brilliant fellow. Deserves full credit for the discovery." There was a long silence. "I insist on scientific integrity, Dr. Flores, and I have your report in my hands. It absolves humans as carriers of the virus. I agree that this development will be bad for your clinic, but that cannot be helped. Good-bye, Dr. Flores. Thank you for calling." He hung up the phone, turned. Trent was nowhere in sight.

That afternoon the last remaining pureblood Saint Bernard died at Anguac, Manitoba. By the following morning, Georgian officials had confirmed that their isolation kennels near Igurtsk were infested. The search for uninfected dogs continued, conducted now by robots. In all the world there were nine dogs known to be free of Virus D-D—six adult hounds and three puppies. They sniffed around their mountain kennel, despondent at the lack of human companionship.

When Trent arrived at his bachelor apartment that night he found a visitor, a tall (almost seven feet) Class C humanoid, head topped by twin, feather-haired crests, eyes

shaded by slitted membranes like Venetian blinds. His slender body was covered by a blue robe, belted at the waist.

"Ger!" said Trent. He shut the door.

"Friend Varley," said the Vegan in his odd, whistling tones.

They held out their hands, pressed palms together in the Vegan fashion. Ger's seven-fingered hands felt overwarm.

"You've a fever," said Trent. "You've been too long on Earth."

"It is the accursed oxidized iron in your environment," said Ger. "I will take an increased dosage of medicine tonight." He relaxed his crests, a gesture denoting pleasure. "But it is good to see you again, Varley."

"And you," said Trent. "How are the . . ." He put a hand down, made the motion of petting a dog.

"That is why I came," said Ger. "We need more."

"More? Are the others dead?"

"Their cells are alive in new descendants," said Ger. "We used an acceleration chamber to get several generations quickly, but we are not satisfied with the results. Those were very strange animals, Varley. Is it not peculiar

that they were identical in appearance?"

"It sometimes happens," said Trent.

"And the number of chromosomes," said Ger. "Aren't there . . ."

"Some special breeds differ," said Trent hurriedly.

"Oh." Ger nodded his head. "Do you have more of this breed we may take?"

"It'll be tricky to do," said Trent, "but maybe if we are very careful, we can get away with it."

Commander Makaroff was *delighted* to renew his acquaintance with the famous Dr. Trent. He was *delighted* to meet the visitor from far Vega, although a little less delighted. It was clear the commander was generally suspicious of out-worlders. He ushered the two into his office, seated them, took his place behind his desk.

"I'd like a pass permitting Dr. Anso-Anso to visit my kennel," said Trent. "Not being an Earth-human, he does not carry the virus and it will be quite safe to . . ."

"Why?"

"You have, perhaps, heard of the Vegan skill in bio-physics," said Trent. "Dr. Anso-Anso is assisting me in a line of research. He needs to take

several blood and culture samples from . . ."

"Couldn't a robot do it?"

"The observations depend on highly specialized knowledge and there are no robots with this training."

"Hmmm." Commander Makaroff considered this. "I see. Well, if you vouch for him, Dr. Trent, I'm sure he's all right." His tone suggested that Dr. Trent *could be* mistaken. He took a pad from a drawer, scrawled a pass, handed it to Trent. "I'll have a police 'copter take you in."

"We have a specially sterilized 'copter with our lab equipment," said Trent. "Robotics International is servicing it right now."

Commander Makaroff nodded. "I see. Then I'll have an escort ready for you whenever you say."

The summons came the next day on a pink sheet of paper:

"Dr. Varley Trent is ordered to appear tomorrow before the special sub-committee of the Federated Senate Committee on Health and Sanitation at a hearing to be conducted at 4 p.m. in the office building of the Federated Senate." It was signed, "Oscar Olaffson, special assistant to Sen. Gilberto Nathal."

Trent accepted the summons in his lab, read it, took it up to Han-Meers' office.

The professor read the order, handed it back to Trent. "Nothing is said about charges, Varley. Where were you yesterday?"

Trent sat down. "I got my Vegan friend into the preserve so he could snatch the three puppies. He's half way home with them by this time."

"They discovered it on the morning count, of course," said Han-Meers. "Ordinarily, they'd have just hauled you off to jail, but there's an election coming up. Nathal must be cozy with your Commander Makaroff."

Trent looked at the floor.

"The Senator will crucify you in spite of your virus discovery," said Han-Meers. "I'm afraid you've made powerful enemies. Dr. Flores is the brother-in-law of Senator Grapopulus of the Appropriations Committee. They'll bring in Flores Clinic people to claim that the virus carrier could have been discovered without you."

"But they're my dogs! I can . . ."

"Not since the emergency census and quarantine act," said Han-Meers. "You're guilty of sequestering government property." He pointed a

finger at Trent. "And these enemies you've made will..."

"I've made! You were the one had to pull the grandstand act with Flores."

"Now, Varley. Let's not quarrel among ourselves."

Trent looked at the floor. "Okay. What's done is done."

"I have a little idea," said Han-Meers. "The college survey ship, the Elmendorff, is out at Hartley Field. It has been fueled and fitted for a trip to Sagittarius."

"What does that mean?"

"The ship is well guarded, of course, but a known member of the staff with a forged note from me could get aboard. Could you handle the Elmendorff alone?"

"Certainly. That's the ship we took to Vega on the biophysical survey."

"Then run for it. Get that ship into hyper-drive and they'll never catch you."

Trent shook his head. "That would be admitting my guilt."

"Man, you *are* guilty! Senator Nathal is going to *discover* that tomorrow. It'll be big news. But if you run away, that will be bigger news and the senator's screaming will be just so much more background noise."

"I don't know."

"People are tired of his noises, Varley."

"I still don't like it."

"Varley, the senator is desperate for vote-getting news. Give him a little more time, a little more desperation, he'll go too far."

"I'm not worried about the senator. I'm worried about..."

"The dogs," said Han-Meers. "And if you escaped to Vega you could give them the benefit of your knowledge of terrestrial biology. You'd have to do it by remote control, of course, but..." He left the idea dangling there.

Trent pursed his lips.

"Every minute you waste makes your chances of escape that much slimmer." Han-Meers pushed a pad toward Trent. "Here's my letterhead. Forge your note."

Twenty minutes after Trent's 'copter took off for Hartley Field, a government 'copter settled to the campus parking area. Two men emerged, hurried to Han-Meers' office, presented police credentials. "We're looking for a Dr. Varley Trent. He's charged with violating the dog-restriction act. He's to be held in custody."

Han-Meers looked properly horrified. "I think he went

home. He said something about not feeling well."

Senator Nathal raged. His plump body quivered. His normally red face became redder. He shouted, he screamed. His fuming countenance could be seen nightly on video. Just when he was reaching a fine climax, warning people against unbridled science, he was pushed aside by more important news.

The last dog in an isolation preserve—a brindle chow—died from virus infection. Before the senator could build up steam for a new attack, the government announced the discovery of an Arctic wolf pack of twenty-six animals untouched by virus. A day later, robot searchers turned up a live twelve-year-old mongrel on Easter Island and five cocker spaniels on Tierra del Fuego. Separate preserves for dogs and wolves were prepared on the west slope of the Olympic Mountains, all of the animals transported there.

Wolves, cockers, mongrel and hounds—they were the world's pets. Excursions in sealed 'copters were operated from Aberdeen to a point five kilometers from the dog-wolf preserve. There, powerful glasses sometimes gave a

glimpse of motion which imagination could pad into a dog or wolf.

About the time Senator Nathal was getting ready to launch a new blast, pointing out that Trent's hounds were not necessarily important, that there had been other canine survivors, the twelve-year-old mongrel died of old age.

Dog lovers of the world mourned. The press took over and all the glory of mongrel-dom was rehashed. Senator Nahal again was background noise.

Trent headed for Vega, hit hyper-drive as soon as he had cleared the sun's area of warp. He knew that the Vegans would have to quarantine him to protect the dogs, but he could follow the experiments on video, help with his knowledge of terrestrial biology.

Professor Han-Meers, protesting ill health, turned his college duties over to an assistant, went on a vacation tour of the world. First, he stopped at the capital, met Senator Nathal, apologized for Dr. Trent's defection and praised the politician's stand.

In Geneva, Han-Meers met a pianist whose pet dalmations had been among the

first to die in the epidemic. At Cairo, he met a government official who had bred wolf hounds, also among the first deceased. In Paris, he met the wife of a furrier whose pet airdale, *Coco*, had died in the third wave of the epidemic. In Moscow, in Bombay, in Calcutta, in Singapore, in Peking, in San Francisco, in Des Moines, in Chicago, he met others in like circumstances. To all he gave notes of introduction to Senator Nathal, explaining that the senator would see they received special treatment if they wanted to visit the Olympic preserve. Han-Meers expected at least one of these people to become a scandalous nuisance sufficient to insure the senator's political embarrassment.

The wife of the Paris furrier, Mme. Estagién Couloc, paid off, but in a manner Han-Meers had not anticipated.

Mme. Couloc was a slim woman of perhaps forty-five, chic in the timeless French fashion, childless, with a narrow, haughty face and a manner to match it. But her grandmother had been a farm wife and underneath the surface of pampered rich woman, Mme. Couloc was tough. She came to Aberdeen com-

plete with two maids, a small Alp of luggage and a note from Senator Nathal. She had convinced herself that all of this *nonsense* about humans carrying the disease couldn't possibly apply to her. *A few simple sanitary precautions and she could have a dog of her own.*

Mme. Couloc meant to have a part-beagle dog, no matter the cost. The fact that there were no dogs to be had, made her need all the more urgent. Cautious inquiries at Aberdeen convinced her this would have to be a lone-handed job. Amidst the tangled, psychological desperation which filled her mind, she worked out a plan which had all of the evasive cunning characteristic of the mentally ill.

From the air, on one of the daily excursions, Mme. Couloc surveyed the terrain. It was rugged enough to discourage a less determined person. The area had been maintained in its natural state for seven hundred years. Thick undergrowth of salal, devil club and huckleberry crowded the natural avenues of access to the interior. Rivers were full of the spring snow melt. Ridge-tops were tangles of windfalls, wild blackberries in the burns, granite outcroppings. After the rough terrain there

was a double fence—each unit sixteen meters high, a kilometer between.

Mme. Couloc returned to Aberdeen, left her maids at the hotel, flew to Seattle where she bought tough camping clothes, a rope and grappling hook, a light pack, concentrated food and a compass. A map of the preserve was easy to obtain. They were sold as souvenirs.

Then she went fishing in the Straights of Juan de Fuca, staying at Neah Bay. To the south towered the Olympics, remote snow caps.

For three days it rained; five days Mme. Couloc fished with a guide. On the ninth day she went fishing alone. The next morning, the Federated Coast Guard picked up her overturned boat off Tatoosh Light. By that time she was nineteen kilometers south of Sequim, two kilometers inside the prohibited area which surrounded the fences. She slept all day in a spruce thicket. Moonlight helped her that night, but it took the entire night for her to come within sight of the fence. That day she crouched in a tangle of Oregon grape bushes, saw two tripod-legged robot patrols pass on the other side of the fence. At nightfall she moved forward,

waited for a patrol to pass and go out of sight. The grapple and rope took her over the top. The kilometer between fences was cleared of trees and underbrush. She crossed it swiftly, scaled the final barrier.

The robotics patrols had counted too heavily on the forbidding terrain and they had not figured a psychotic woman into their plans.

Two kilometers inside the preserve, Mme. Couloc found a cedar copse in which to hide. Her heart racing, she crouched in the copse, waiting for the dawn in which to find *her dog*. There were scratches on her face, hands and legs; her clothes were torn. *But she was inside!*

Several times that night she had to dry her perspiring palms against her khaki hiking trousers. Toward morning, she fell asleep on the cold ground. Bess and Eagle found her there just after dawn.

Mme. Couloc awoke to the scraping of a warm, damp tongue against her cheek. For a moment, she thought it was her dead *Coco*. Then she realized where she was.

And the beautiful dogs!

She threw her arms around Bess, who was as starved for human affection as was Mme. Couloc.

Oh, you beautifuls!

The robotics patrol found them there shortly before noon. The robots were counting dogs with the aid of the tiny transmitters they had imbedded in the flesh of each animal. Mme. Couloc had been waiting for nightfall in which to escape with a dog.

Bess and Eagle ran from the robots. Mme. Couloc screamed and raged as the impersonal mechanicals took her away.

That afternoon, Eagle touched noses with a wolf female through the fence separating their enclosures.

Although the robots put each dog in isolation, they were too late. And nobody thought to bother with the wolves in their separate preserve.

In seven weeks the dog-wolf preserves were emptied by Virus D-D. Mme. Couloc was sent to a mental hospital in spite of the pleas of an expensive lawyer. The news services made much of Senator Nathal's note which had been found in her pocket.

Earth officials sent a contrite message to Vega. It was understood, said the message, that one Dr. Varley Trent had given Earth dogs to a Vegan bio-physicist. Were there, by

any chance, some dogs still alive?

Back came the Vegan reply: *We have no dogs. We do not know the present whereabouts of Dr. Trent.*

Trent's ship came out of hyper-drive with Vega large in the screens. The sun's flaming prominences were clearly visible. At eight hundred thousand kilometers, he increased magnification, began scanning for the planet. Instead, he picked up a Vegan guard ship arrowing toward him. The Vegan was only six thousand kilometers off when it launched a torpedo. The proximity explosion cut off Trent's quick leap for the transmitter to give his identity. The ship buckled and rocked. Emergency doors slammed, air hissed, warning lights came on, bells clanged. Trent scrambled to the only lifeboat remaining in his section. The tiny escape craft was still serviceable, although its transmitter was cracked open.

He kept the lifeboat in the shadow of his ship's wreckage as long as he could, then dove for the Vegan planet which loomed at two o'clock on his screen. As soon as his driver tubes came alight, the Vegan sped after him. Trent

pushed the little boat to its limit, but the pursuer still gained. They were too close to the planet now for the Vegan to use another torpedo.

The lifeboat screamed into the thin edge of the atmosphere. *Too fast!* The air-cooling unit howled with the overload. A rear surface control flared red, melted, fused. Trent had time to fire the emergency nose rockets, cut in automatic pilot before he blacked out. The ship dived, partly out of control, nose rockets still firing. Relays clicked—*full alarm!*—circuits designed to guard human life in an emergency came alive. Some worked, some had been destroyed.

Somewhere, he could hear running water. It was dark where he was, or perhaps lighted by a faint redness. His eyelids were stuck tightly. He could feel folds of cloth around him. A parachute! The robot controls of the lifeboat had ejected him in the chute-seat as a last resort.

Trent tried to move. His muscles refused to obey. He could sense numbness in his hips, a tingling loss of specific perception in his arms.

Then he heard it—the baying of a hound—far and clear. It was a sound he had

never again expected to hear. The bugling note was repeated. It reminded him of frosty nights on Earth, following Bess and Eagle and . . .

The baying of a hound!

Panic swept through him. The hound mustn't find him! He was Earth-human, loaded with deadly virus!

Straining at his cheek muscle, Trent managed to open one eye, saw that it was not dark, but a kind of yellow twilight under the folds of the parachute. His eyelids had been clotted with blood.

Now he could hear running feet, a hound's eager sniffing.

Please keep him away from me! he begged.

An edge of the chute stirred. Now there was an eager whining. Something crept toward him under the cloth.

"Go away!" he croaked.

Through the blurred vision of his one eye, Trent saw a brown and white head—very like Eagle's. It bent toward something. With a sick feeling, Trent realized that the *something* was one of his own outstretched, virus-filled hands. He saw a pink tongue come out, lick the hand, but could not feel it. He tried to move and unconsciousness overwhelmed him. One last thought flitted through his

mind before the darkness came—

"Each man kills the thing he . . ."

There was a bed beneath him—soft, sleep-lulling. In one part of his mind he knew a long time had passed. There had been hands, needles, wheeled carts taking him places, liquids in his mouth, tubes in his veins. He opened his eyes. Green walls, glaring white sunshine partially diffused by louvre shutters, a glimpse of blue-green hills outside.

"You are feeling better?" The voice had the peculiar whistling aspiration of the Vegan vocals.

Trent shifted his gaze to the right. Ger! The Vegan stood beside the bed, deceptively Earth-human in appearance. His shutter-like eye membranes were opened wide, the double crest of feathery hair retracted. He wore a yellow robe belted at the waist.

"How long . . ."

The Vegan put a seven-fingered hand on Trent's wrist, felt the pulse. "Yes, you are feeling much better. You have been very ill for almost four of your months."

"Then the dogs are all dead," said Trent, his voice flat.

"Dead?" Ger's eye membranes flicked closed, opened.

"I killed them," said Trent. "My body's loaded with dormant virus."

"No," said the Vegan. "We gave the dogs an extra white blood cell—more predatory. Your puny virus could not survive it."

Trent tried to sit up, but Ger restrained him. "Please, Varley. You are not yet recovered."

"But if the dogs are immune to the virus . . ." He shook his head. "Give me a shipload of dogs and you can name your own price."

"Varley, I did not say dogs are immune. They . . . are . . . not like dogs exactly. We cannot give you a shipload of your animals because we do not have them. They were sacrificed in our work."

Trent stared at him.

"I have unfortunate news, my friend. We have made our planet restricted to humans. You may live out your life here, but you may not communicate with your fellows."

"Is that why your ship fired on me?"

"We thought it was an Earth vessel coming to investigate."

"But . . ."

"It is regrettable that

yourself must be kept here, Varley, but the pride of our peoples is at stake."

"Pride?"

The Vegan looked at the floor. "We, who have never failed a bio-physical alteration . . ." He shook his head.

"What happened?"

The Vegan's face went blue with embarrassment.

Trent recalled his first awakening on this planet. "When I recovered consciousness I saw a dog. At least I saw its head."

Ger pulled a wicker chair close to the bed, sat down. "Varley, we tried to combine the best elements of our own *progoas* and the Earth dogs."

"Well, wasn't that what you were supposed to do?"

"Yes, but in the process we lost all of the dogs you sent us and the resultant animals . . ." He shrugged.

"What are they?"

"They do not have a scaly tail or horned snout. For centuries we have been telling the Universe that sentient pets of the highest quality must show these characteristics of our own *progoas*."

"Aren't the new animals intelligent and loyal? Do they have as good hearing, sense of smell?"

"If anything, these charac-

teristics have been heightened."

He paused. "You realize, though, that this animal is not truly a dog."

"Not truly a . . ."

"It's fully serviceable . . ."

Trent swallowed. "Then you can name your own price."

"When we made our first cross, the *mikeses* fertilization process united an open *progoa* cell with a dog cell, but a series of peculiar linkages occurred. They were not what we had come to expect from our readings and from what you had told us.

Trent took a deep breath, exhaled slowly.

"It was as though the gene pattern of dog characteristics were predatory, tying down tightly even with *progoa* dominants," said Ger. "Each time we repeated the process; the same thing occurred. From our knowledge of terrestrial biology, this should not have been. The blood chemistry of our animals is based on the element you call copper. We have not much iron on our planet, but what few of your type of animals we had proved to us that the copper-basic was dominant in a *mikeses* cross. Of course, without a *mikeses* generator, cells cannot be opened to per-

mit such a cross, but still . . ."

Trent closed his eyes, opened them. "No one else will ever hear what I am about to tell you . . ." He hesitated.

Vertical lines of thoughtfulness appeared in the Vegan's cheeks. "Yes?"

"When I was here on the survey trip, I copied the diagram of a *mikeses* generator. I was able to build a working model on Earth. With it, I developed a line of hounds." He wet his lips with his tongue. "We have life on Earth with blood of copper-base chemistry. The common squid of our oceans is one of them."

Ger lowered his chin, continued to stare at Trent.

"With the generator, I linked the canine dominants of my dogs with a recessive of squid."

"But they could not breed naturally. They . . ."

"Of course not. The hounds I sent you were from a line which had no fathers for six generations. I fertilized them with the generator. They had only the female side, open to the first linkage which presented itself."

"Why?"

"Because, from my observations of *progoas*, I knew dogs were superior, but could profit by such a cross. I hoped to

make that cross myself."

The Vegan looked at the floor. "Varley, it pains me, but I am faced with the evidence that your claim is true. However, the pride of my world would never permit this to be known. Perhaps the Elders should reconsider."

"You know me," said Trent. "You have my word on it."

Ger nodded. "It is as you say, Varley. I know you." He preened a feather crest with three fingers. "And through knowing you, perhaps I have tempered the pride which rules my world." He nodded to himself. "I, too, will remain silent." A subtle Vegan smile flitted across his face, disappeared.

Trent recalled the beagle head he had seen under the parachute when he'd recovered consciousness. "I'd like to see one of these animals."

"That can be . . ." Ger was interrupted by the near bay-ing of a pack of hounds. He stood up, flung open the window louvres, returned to support Trent's head. "Look out there, friend Varley."

On the blue-green Vegan plain, Trent could see a pack of hounds coursing in pursuit of a herd of runaway *ichikas*. The hounds had the familiar beagle head, brown and white fur. All had six legs. **THE END**

THE PENT HOUSE

DAVID H. KELLER, M.D.

Illustrated by LEO MOREY

Another "Kelleryarn" for all those—a clear majority—who praised "The Worm" (in Fantastic for last September) and "White Collars" (in our 40th Anniversary issue). This one about a beneficent old doctor who is sure that in five years time the human race will be finished—unless he can persuade the right sort of couple—married or not—to wait Doomsday in a self-sustaining pent house sealed off from deadly carcinogenic clouds!

WANTED: *Full-time service of a young man and woman. Must be cultured, well educated, in perfect health and congenial. Employment guaranteed for five years. Inquire in person. Times building, room 1030.*

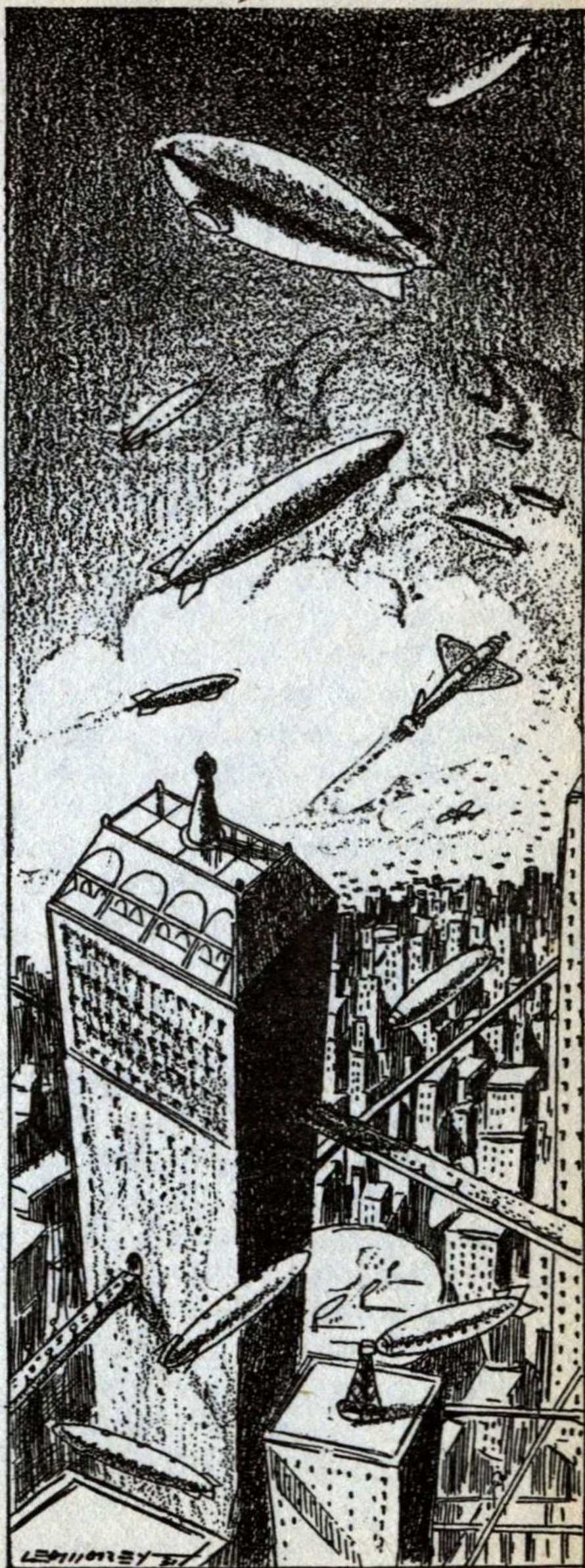
THIS advertisement in the personal column of the *New York Tribune* did not miss fire. There were too many people without work. As far as the culture and education were concerned, practically all who read the advertisement in a serious mood admitted that they were able to qualify.

Consequently the waiting room of 1030 was immediately packed with applicants for the position. To the sorrow of many it was announced that single applicants would not be given any consideration. The word congenial implied previous acquaintance and a paired effort to obtain the work. The announcement was gravely made that the situation was not only for a man and a woman, but for a couple who were well acquainted with each other.

Mankind has a peculiar ability for adapting itself to new and novel situations. Many of the

single applicants came back in a few hours with one of the opposite sex, concerning whose congeniality there could be no room for doubt. At the end of the week over five thousand couples had filled out the required papers. Now began a very complicated process of elimination. A personal interview with university professors quickly determined the degree of culture and education each couple possessed. These two factors disposed of over ninety percent of the applicants. Then came a physical examination to turn back the unfit. This was most illuminating, both as to the health of the average New Yorker and as an index to what could be expected of the generations to come. Something seemed wrong with almost every person examined, and in many instances if the man was healthy, the woman was not.

At last only five couples remained, and then the question of congeniality had to be determined. The psychologists who estimated this factor did so by asking each of the ten persons five hundred questions, each of which had to be answered by a "Yes" or "No." It was thought that a ninety percent uniformity on the part of the man and woman indicated congeniality. The examination considered the likes and dislikes on every possible subject. And the result was that not one of



the five pair came within even seventy-five percent of perfection.

The results were given in detail to the old man who was financing the investigation. The results were not at all pleasing to him, but he frowned at the suggestion that the advertisement be reinserted.

"It will only result in the same ending," he declared. "Suppose you send them in to me, a pair at a time."

He was a lonely figure as he sat stooped shouldered and white haired at his mahogany desk. Around him, in pictures, draperies and furnishings, were many reminders of evident wealth. He, however, was plainly dressed, and a careful observer would have noticed that the heels of his shoes were run down. Evidently he was either too busy or too independent to bother with such trifles.

The young people came into the room in pairs, and he asked each couple the same question:

"Why are you applying for this position?"

One couple replied that they needed the work; another that the five-year contract would enable them to save enough money to start business for themselves; another pair wanted security of employment and leisure so they could study for additional degrees at Columbia. Finally the last pair came in. The same question was asked. The man looked

at the woman, smiled, and replied:

"Because we love each other, and it seemed that, if we obtained this position, it would give us a chance to be together a good deal."

The old man smiled and rang for the psychologists.

"What percentage of congeniality did this pair show?" he asked.

"They were the lowest. Under fifty percent."

The old man smiled as he commented:

"I think it was more a test of the psychologists than of the young people. I am going to offer this man and woman the position. Pay all the rest for their time and dismiss them. Discharge all the specialists."

He waited till they left the room, and then turned to the young people.

"And now," he said, "you have a job that will last for five years. Out of five thousand persons, you were the two who made the grade. Do you want to know what the work is to be?"

"It does not make much difference, sir," the girl replied. "So long as we can see a lot of each other."

"That is not a bad answer," the old man said with a laugh. "But at the same time I think you should know more about it before you make the final acceptance. These are the facts —

"My name is Dr. Jordan. Finance is my business, research work my avocation. Thus I make and spend money. I am building, and am just about finished with it, a seventy-story apartment house. On the top is a penthouse which is rather unusual in architecture and size. It is really most complete in every way, and entirely self-sustaining as far as all service is concerned. That gives it complete isolation. It is really a lonely island in the air; but instead of a sky for a roof it has a roof of glass, opaque glass of a very satisfactory thickness. Underneath the floor, in something that might be termed a basement, I have built storerooms which are very large. These have been filled with every possible necessity and many luxuries. In the basement and the pent house everything necessary for the comfort, health and happiness of two young people will be placed. I have had specialists in every line assist me in selecting these supplies, and I am sure nothing has been overlooked. Everything has been carefully catalogued, and that card index is a work of art. Whatever you want or think you want, refer to the card index and its location will be given, or a substitute named.

"I have not overlooked the problem of entertainment and happiness. There is a phonograph with five thousand records, and a library with as many books. If you

want to begin any form of activity, consult the catalogue and you will find advice and directions. I have a gymnasium, laboratory, workshop.

"Your work will be comparatively simple. The two of you will enter the penthouse, and the door will be locked. It is a very substantial door with a time lock. At the end of five years it will open automatically. No one knows the combination that will unlock it except myself. At the end of five years the door will be open and you can walk out."

"And all we have to do to earn our salary is to walk up there, stay there for five years and walk out again?" asked the man.

"That is all," answered the Doctor.

"And what is the salary?" asked the man.

"Oh! Why bother about that?" said the woman, interrupting the conversation.

"Correct. Why bother?" replied the old man with a smile. "When the door opens and you come out, the entire wealth of the world will be yours. At least half of it, for there will be another young couple in San Francisco to share it with you. Even after you divide with them, you will have all you can desire."

"Everything ours?" asked the young people with a gasp. "How will that be possible?"

"Because I believe that the four

of you will be the only human beings alive at that time."

"You must be joking" declared the young man indignantly.

"Not at all. I never was in greater earnest. Cancer is the threat behind it all. Perhaps you do not know it, but even now it is more than serious. One out of every four who die after the age of 40 die from some form of cancer. The incidence of the disease is rapidly increasing. I have my own idea of the cause. I think the condition comes from a very minute, ultra-microscopic germ in the air. These come from some distant planet in great clouds. I am sure that we have been on the edge of one of these clouds for some years, and now we are going to enter it. When we are once surrounded by it, the entire human race will die in a year or two from cancer.

"But the refuge I have provided for you two in New York, and for the similar couple out West, provides complete protection. The penthouse is hermetically sealed, and the air within is automatically purified. All of the machinery is operated by electricity, and there are three distinct units. If one fails, the other two are available. You will be taught how to use them. My specialists tell me the system is perfect and foolproof. They have been working on the idea for years and have kept animals alive for a

long time in glass chambers constructed on the same plan as the penthouse.

"You two are to go there and live. Keep in mind the future. At the end of five years you will walk out. I have arranged for your satisfactory communication with the young people in San Francisco. The four of you will have to continue the human race. My figures show that in two years you four will be the only men and women alive and that at the end of five years the earth will not only have passed out of the cancer cloud but the germs on the earth will have died out for lack of fresh victims. Then you will be safe for life in a new and perhaps a rather lonely world."

"Will we have any communication with the outside world?" asked the man. "Can we have a telephone and radio?"

"No. It would be too discouraging. I am not even going to let you see the sky because then day by day you would see the gradual diminution in the number of airplanes."

"It is a good position, commented the woman, "and I am sure we are thankful to you for it, but who will pay us when the time is up?"

"I told you that you would have half of everything."

"I understand that, but somehow we will feel that it was not really earned by us. Could you pay

us in advance? You see we could not spend it, and it would be just as safe in the penthouse as it would be in one of your banks."

"I will do that. How would a hundred thousand in gold do? No use giving you paper money, for all of the banks are going to go out of existence and all of the governments, too."

Suddenly the woman looked serious. Taking her partner in the fantastic adventure to one side, they engaged in earnest conversation. At last she came back to the old man and took hold of his hand. There was no doubt of the sincerity in her voice.

"We want to ask you a favor, Doctor," she said. "We are going to ask you to come and live with us. You are not so very old and you have thought this all out and planned it all and, it just seems as though you ought to see the experiment through to the end. It would be too bad to have you pass out with the rest of the race."

"You don't need me. You will be happier without me."

"Perhaps we don't need you, but we really do want you. You will be company for us, and I feel that as the months pass, we would grow to love one another. You would be just like a Father to us."

"We are in earnest," agreed the man. "We really want you."

"I'll give it some thought,"

replied the old scientist, and in the end he really did say "Yes."

He put all his financial affairs in the hands of a trust. He told his friends that he was going to Europe. Fearing the sting of ridicule, he had kept the real secret of the penthouse to himself, so when the three of them went in and closed the door behind them, no one knew about the tremendous experiment that was being conducted in person by one of the leaders of science.

Thus for the first time in many years the dear old fellow had time to do as he really pleased. He had always wanted to study certain phenomena relative to the development and growth of the yeast plant. The young woman, Doris, made very fine bread and this kept the Doctor well supplied with a constantly fresh amount of yeast. Up to this time he had been so busy making his millions, that he had had no time for such studies. Now his time was fully occupied with his hobby, but there were lots of spare moments for a game of cards while Doris sewed at the side of the table.

The man, Claude, had a rather large number of household tasks that had to be attended to with a very definite routine. The electric generators had to be looked after, the air machines properly regulated and the supplies for the day brought up from the store rooms. Then the little garden in the con-

servatory had to be properly cultivated to insure a proper and adequate supply of fresh vegetables. In the afternoon he and Doris always had a game of volley ball followed by a swim in the pool. Claude asked the Doctor one day about their water supply.

"If everyone dies," he said, "the water supply of the city will fail. How will we get along then?"

But the old man simply laughed and explained that he had an artesian well under the building which served no other purpose than to supply water to the penthouse, the water being raised from its source by electric pumps under automatic control.

"And so long as our gasoline holds out, the pumps will work," the old man added.

Doris was busy but was not driven by her work. She cooked and read and sewed, played volley ball, dreamed and had a wonderful time generally.

If there was no demand for a card game, there was always some old favorite available on the victrola, a good book, interesting conversation, or just old fashioned courting in the living room, while the old Doctor pretended to be deeply engrossed in his studies.

A year passed and then two. One night in the early months of the third year Claude roused the Doctor.

"Doris is not feeling good," he whispered. "She wants you to come and see her."

An hour later the physician rejoined the young man and said:

"I have been so interested in the larger details of this experiment that I have overlooked some of the smaller ones. Are you young people married?"

"Certainly. A week before we came up here. Why?"

"Nothing. I just wanted to know."

Hours later the Doctor came out again:

"It's a girl, Claude, and everything is all right."

"What do you mean, Doctor?"

"I mean that you and Doris have a daughter."

"I don't understand it," exclaimed the astonished man.

"Fathers never do," replied the old scientist, who for the last twelve hours had been both doctor and nurse.

So after that four lived in the penthouse. There was no scarcity of supplies. It seemed that the wise old man had anticipated precisely this possibility.

Little Susanne was walking and talking when the five years expired. The four were having such a happy and satisfied time that for long weeks they forgot just why they were living in the penthouse. In fact the young parents were astonished when the Doctor told them that the door would

be open on the following day.

"And I will go down into the world by myself," he explained, "I will go down first to see what has happened and if it is safe for you to come and bring the baby. I will close the door but not lock it. If I do not return in a reasonable time, I think that you had better stay up here another year."

They kissed the old man goodbye and urged him to take care of himself. Susanne asked him to bring her a new doll and pink dresses with yellow dots on them. It was a rather silent and sober family who saw the old man go down the steps and close the door after him.

Two hours later he came back through the doorway and closed the door behind him. He looked very quiet and older than when he left. Claude and Doris felt that he had news, very bad news to tell.

"I went down and found out what had happened. In a way I was right. There were a great many more cases of cancer after we came up here. That part of my prophecy turned out to be correct. But a month after we came here Stamboole of Vienna perfected a cancer serum, a very simple formula, but it was extremely effective. Practically all the civilized world was given the treatment. It must have been a perfect defence as there has not

been a case of cancer-death in the last three years."

"Then the world is just as it was five years ago?" asked Claude breathlessly.

"No. Its worse. If anything, the city is noisier and dirtier. The people have more money and more leisure. They have a six-hour working day, but they do not know how to spend their spare time. They are trying to amuse themselves. The television houses are packed, the sky is full of commercial airplanes, while the poor people are packing the roads with cheap machines. All the vices are increasing and all the virtues are going out of fashion. There are ten rackets for every one we had five years ago. The gangsters are killing themselves. The rich people are drinking and dancing themselves to death while the poor people are dying from hunger. No one seems to be happy. The death rate is twice as large as it was ten years ago, and the lap dog has replaced the baby. I saw all I wanted to. It seemed to me that the world has escaped the cancer death so it could die from neurasthenia."

Claude looked at Doris and Doris looked at Claude and the two looked at Susanne, who was playing with the new dolly the scientist had brought her.

"I am very sorry," finished the Doctor," very sorry. I have literally robbed you youngsters of

five years of your life. But you have the money you have earned, and you won't have any trouble spending it, at least not in New York. You ought to have a fine start financially, and if you need more, I will be glad to give it to you. You really have been just like my own children, and I am just sorry it all turned out like it did."

"I think," replied Doris, "and I am sure that Claude will agree with me . . . I think that it worked out all right. What I want you to do is—and I hope you will do it without any argument—and it's just this. Get more supplies of every kind and then—just lock the door for another five years of Heaven in a penthouse.

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OCTOBER 1965

If you know anyone as irascible as the late Mr. Scuttlebottom—the ill-starred real estate man in the Donald Bern story that follows—then you'd better warn him to stay away from a bizarre little shop called Ye Village Book Stall. But if he should wander in by mistake one day, tell him above all not to pick up anything on mindreading. Otherwise—like Scuttlebottom—he may have to learn the hard way that mindreading can be tricky—especially when you're staring down the barrel of a gun!

THE MAN WHO KNEW ALL THE ANSWERS

By DONALD BERN

THE faded gilt sign read:

YE VILLAGE BOOK STALL

"Fiddlesticks!" Scuttlebottom grunted. "Central City hasn't been a village for thirty years."

In such a mood, he tripped down the decaying stone steps and half fell through the rickety screen door, which he opened just in time.

"What the hell. . . ." Scuttlebottom did a half somersault and lit on his pudgy feet, glaring.

A little man came walking slowly up the dusty aisle. He wore a pince-nez. He looked exactly like a person who wears a pince-nez. Only in this case, a little more so. His forehead was high, and locks of gray hair streamed down over his thin, gently inquiring

face. He had a soft, straggly collar and a flowing bow tie; black sack suit, spats, and cracked patent leather shoes. He had eyes, too; quiet brown eyes that might have known a lot, but never said much.

"Yes?" said the proprietor of Ye Village Book Stall.

"Those stone steps," Scuttlebottom spluttered, "they're falling apart! I almost broke my neck coming in."

"Indeed?" said the proprietor. "Those steps have been here many years, you know. General Grant visited here one day many years ago to buy his wife a present. He stumbled over them, too."

"What the hell do I care!" Scuttlebottom roared. "I came here to buy a book, not to be killed."

"Ah, yes," said the proprietor. "Yes indeed. I was sure of that the moment I saw you coming. Well, sir, is there any particular book you would be interested in?"

Scuttlebottom glared at him. "You probably wouldn't have it," he sneered.

"I have not everything here," the little man said, "but I have much. Oh, yes, indeed."

"Well," barked Scuttlebottom, "I want something different."

"Something—different?"

"That's what I said. Too many adventure books lately. Have to change off for a while. Understand?"

"I," said the little man, "understand perfectly. And I believe I have just what you need."

He led the way along the dusty aisle to a particular dusty table covered with a helter-skelter assortment of dusty books on very dusty themes. He rummaged about in the dim light, finally found what he wanted.

"This," said the little man, "ought to do nicely."

He padded back up the aisle again, with Scuttlebottom coughing and sneezing as dust rose and smote his sourpuss features.

The proprietor dusted off the little book on his pants, held the title up to the light. Scuttlebottom, squinting angrily, read:

THE DORMANT BRAIN

The title was printed in block gold letters, and the binding was of fine leather.

Scuttlebottom, anxious to get out of the place, barked, "How much? And what is this thing about, anyway?"

"It is of the mind," said the proprietor. "With it you may read the inner thoughts of other people. It will give you a power such as you never dreamed possible."

"Rubbish!" roared Scuttlebottom. "How come you've been saving it, if it's so wonderful a book?"

"The right man," the proprie-

tor said softly, "had to come along."

Scuttlebottom growled, tucked the book under his arm and strode toward the door.

"One dollar, please," said the pince-nezed little man.

Scuttlebottom drew out a fat wallet, hastily peeled out a bill and flung it down on a book-covered table.

"Twice what it's worth," he grunted, pushing open the screen door.

"Not," said the little proprietor very softly, "to me."

Scuttlebottom got home a half hour later. He walked into his house, flung his hat on the rack, washed his hands and came down to dinner.

Mrs. Scuttlebottom, a prim, scared little woman, had veal cutlets tonight, Scuttlebottom's favorite. Scuttlebottom, Junior, eighteen years old, seated himself apologetically and waited patiently for his father to be served. Junior had slicked back his hair tonight and put on a clean shirt.

"How is the meat, dear?" Mrs. Scuttlebottom asked in her nervous voice.

"Tough," Scuttlebottom grunted. "Rotten butcher. Buy your meat some place else!"

Mrs. Scuttlebottom flushed. Junior looked unhappy, too. He waited until his father was eating a particularly delicious piece of

blueberry pie.

"Father—"

"No!" Scuttlebottom barked. "Business is bad. I can't go laying out money for silly gadgets and things. Why don't you go to work?"

Junior looked sick. "But father, the Senior Prom is coming off in two weeks. All the other boys are buying tuxedos, and I know where I can get a real nice one for only \$22.50, and—"

"No!" Scuttlebottom roared. "What the hell do you think I am, the mint?" He wiped his mouth angrily on a spotless white napkin, rose from the table.

"Pie too sour, Martha," he grunted at his wife. "Work hard all day and can't even get a decent meal."

He slammed out of the dining room and clumped upstairs to his bedroom. He put on his dressing robe, settled comfortably in a big Morris chair and picked up the book he had bought, "The Dormant Mind."

Downstairs, Mrs. Scuttlebottom was crying, and Junior was trying hard not to show his own bitter disappointment.

The evening grew heavy with darkening shadows. Scuttlebottom switched on the lamp over his head irritably and kept on reading.

Never, never had he ever in his life read a book that absorbed him

as much as this one did. Even as the bookshop proprietor had said, he had never dreamed that such things were possible with the human mind.

In every brain, Scuttlebottom knew, there is the subconscious, which is at work even during sleep. But Scuttlebottom had never realized the amazing power stored deep within this portion of the mind. He had always thought that mind-reading was a fake, a phony, a counterfeit art practiced on sleazy vaudeville stages by crackpot entertainers.

Now as he read, a whole new vista of the human intellect was revealed to him. His eyes remained glued to the printed pages; his whole attention was utterly concentrated on the fascinating message there. And when he finished the little book, closely printed, it was with a start.

Dawn was streaking the eastern heavens.

"Gosh!" Scuttlebottom muttered. "I've been reading this all night."

He sat for a while, pondering the things he had read. Then he got up, rubbed his eyes, undressed mechanically and flopped into bed

Scuttlebottom groaned when the alarm clock went off. But habit was too old to break. He pulled on his trousers, washed, finished dressing and went down to break-

fast, late for the first time in years.

Junior was already sitting at the table. He glanced covertly at his father and noticed that his parent seemed to be thinking about something. Mrs. Scuttlebottom, seeing the same thing, said "Thank God!" under her breath. Maybe her husband would not complain about his carefully broiled ham this morning.

"No!" Scuttlebottom shouted suddenly, glaring up from his plate at Junior.

Junior, who had been thinking about whether to broach the subject of the tuxedo suit again, almost collapsed.

"I didn't say anything!" he bleated.

Scuttlebottom stared, realized that his son indeed hadn't said a word. Glowering, he returned to his eating.

Junior's mother and Junior exchanged unhappy glances.

"He's in a terrible humor again," they seemed to be telling each other.

"How dare you say such a thing!" Scuttlebottom roared, pushing back his chair and getting up in a terrific huff.

"We didn't say a word!" mother and son cried, white faced.

Scuttlebottom almost jumped. His heavy jowls got red.

"No, I guess you didn't," he grunted. "Anyway, you spoiled my appetite!"

He grabbed up his hat and stormed out of the house. Just as suddenly he stormed back in, stamped into the dining room and grabbed Junior's arm.

"What did you say about me?" he yelped.

Junior cringed. "But I didn't say a thing!"

Scuttlebottom shook in restrained rage. "Well, I don't like what you've been *thinking!*" he blurted.

Junior's blue eyes grew blank and round. He stared. He stared so hard that his father dropped his hold and stared, in turn, at the long-suffering Mrs. Scuttlebottom. Mrs. Scuttlebottom put a hand to her throat and stared even harder.

"Oh, my God!" Scuttlebottom groaned. "You both think I'm crazy!"

Mother and son chorused, "We never said anything like that!"

Scuttlebottom flushed brick red, glared, shook, and then went stamping out of the house.

Waiting for the street car, Scuttlebottom, still hopping mad, was confronted by Nick Marshetta, the "newsboy" on that corner for the past fifteen years.

Nick had a sick wife to look after. Many of his customers never asked for the two cents' change from their nickels. Scuttlebottom always did.

"Da cheapskate!" Nick thought as he handed Scuttlebottom the

paper and two cents change.

"What the hell did you say!" Scuttlebottom shouted.

Half a dozen people turned around and stared at him. Nick looked frightened.

"Never said nothin'," he muttered. "Always keep my mouth shut."

"That's the best thing you do!" Scuttlebottom, rasped, and stepped out to the approaching trolley.

At his office building, in which he had an interest, Scuttlebottom was greeted by the plump, good-natured elevator man who usually took him up.

"Good morning, Mr. Scuttlebottom. Nice day out."

"I hadn't noticed it," Scuttlebottom snapped.

The elevator man didn't answer. But Scuttlebottom thought he had.

"You said I was a 'sourpussed old skinflint!'" Scuttlebottom shouted.

"I never said anything!" the man protested, knowing his job was at stake.

The other passengers in the car glared at Scuttlebottom. Among them were a couple of good tenants who had been threatening to move. Scuttlebottom choked.

"Must have been my imagination!" he muttered. "I guess I didn't *hear* you say anything"

Scuttlebottom strode into his busy real estate office, looking right through all his scared employees as he barged down the aisle and entered his own sanctum.

He was sourly scanning some overdue tax bills from the city when his secretary for twenty years, Alfred Higgins, padded nervously into the room and stood quaking before the great man.

"Mr. Scuttlebottom," Higgins began, taking a deep breath and clenching his small hands determinedly.

Scuttlebottom looked up, glaring. "No!" he barked. "Absolutely not. You haven't had a vacation in five years, huh, so you think you're going to get one now? Well, *I* haven't had one in ten years, what do you think of that! What's good enough for me is good enough for you. Anything else?"

Higgins drew himself up to his full five feet two.

"Yes," he said quietly, respectfully. "I was offered a position yesterday with Harburton, Smythe and Scraggs. I am accepting it. And if you'll pardon my impertinence, sir, you may go to hell."

Scuttlebottom gasped. His mean blue eyes widened. Involuntarily he found himself looking through his open office door as Higgins walked softly to the rack behind the filing cabinets, took

his hat off the stand, looked for the last time at the desk which had been his for twenty years, and padded unobtrusively out the door.

All the rest of the morning, Scuttlebottom sat staring out the window. Frightened employees came in with papers to sign. Scuttlebottom let them lie. There were several telephone calls. Scuttlebottom mumbled his replies, got one call so badly bolixed up that it cost him a \$5,000 realty commission. Scuttlebottom never turned a hair.

At lunchtime he went downstairs for a malted milk and a ham sandwich.

The counter boy looked at him politely. "Wish that fat slob would eat some place else. Never tips, makes the other customers uneasy," he thought.

Scuttlebottom choked. He grew very red in the face. He slammed down thirty cents, got up abruptly and stomped out into the street.

Across the street was the bank. Scuttlebottom remembered he had a big deal on at nine the next morning. He entered the place, drew a check for a thousand dollars and presented it at the teller's window.

"Good afternoon, Mr. Scuttlebottom," the teller said. But he thought: "The damned fat chiseler! They say he's even lousy to his family. Hope they get his dough when he kicks off. They

certainly deserve all of it!"

Scuttlebottom got apoplectic. "How dare you!" he screamed hysterically. "I'll take my account away from this bank. I'll—"

The cashier had been standing near the teller, going over some accounts.

"But Mr. Scuttlebottom," the cashier protested, as the white-faced teller looked about to faint, "Mr. Watkins here only said 'Good afternoon'. Mr. Watkins has been in our employ for many years, and —"

Scuttlebottom gasped. And for the first time in his adult life, his dogmatic, matter-of-fact mind slipped a cog.

Watkins had never said any such thing, he realized in a panic. Watkins must have—why, he must have *thought* it!

Scuttlebottom got absolutely green about the gills. Nobody, it came to him with a terrific shock, nobody had openly insulted him all day. Nobody but his ex-secretary, and Higgins had *said* quite respectfully what he had felt.

White as a sheet, Scuttlebottom snatched the thousand dollars the teller had been counting out, stuffed the bills absent-mindedly into his trousers pocket and lurched out of the bank.

Back to his office he went. The frightened look on his face scared the wits out of his already frightened employees.

All afternoon he sat in his office, refusing to see anyone.

"That damnable book!" he groaned. "'The Dormant Mind!'. Oh, God, now I can read other people's minds! Now I know what everybody is thinking about me! And I can't *do* anything about it; I can't get anybody fired—because nobody *says* a single word!"

The afternoon sun went down. Evening shadows fell. Scuttlebottom, slumped in his swivel-chair fell asleep finally, emotionally exhausted

A fire engine clanging down the street woke him up.

Scuttlebottom started, rubbed his eyes, saw it was night! He switched on his desk lamp, looked at his watch.

"Nine-thirty! Must have been asleep a couple hours."

Haggard, worn, he took the elevator downstairs and walked over to the building register to sign himself out.

"Why, good evening!" the night man said. "Had a busy day, eh, Mr. Scuttlebottom?"

But he was thinking: "Busy day my hat! That fat pig works his people to death, pays 'em nothing and keeps all the dough to himself. Hope he falls down a manhole and breaks his neck!"

Scuttlebottom jerked as though prodded with a red-hot poker.

"Shut up!" he screamed. "SHUT UP! You're driving me

insane—*crazy, crazy*”

He bolted out the door, leaving a badly frightened man in his wake. Heavy face steaming with sweat, eyes popping in mingled terror and rage, Scuttlebottom pounded down the pavement and turned off at the little street not far from his office, where he had bought, “The Dormant Mind.”

“That bookseller!” he snarled, hysterically angry. “He’s the cause of all this. He sold me that book! I’ll kill him with my bare hands—”

“This is a stick-up Mister! Hands up!”

Out from behind an empty store stepped a slim figure. He held a revolver in his hand, a cap pulled slanting over his eyes. His voice was high-pitched, rasping.

Scuttlebottom stopped dead in his tracks. The maddened gleam in his hard blue eyes paled somewhat as the robber approached.

By the dim light of a street lamp several stores away, Scuttlebottom made out his young assailant.

Thin, taut cheeks. Frightened, inexperienced eyes. Scuttlebottom looked into them and sneered.

The young thug was thinking: “I better make this good! My first job, and the gang won’t take me in ’less I can hold my

own. Gee, this guy looks big”

Scuttlebottom stared a moment longer. Then his lips curled in a mean sneer.

“Bluff me, would you!” he snarled, and made a grab for the other.

The stick-up man jumped back with a scared cry. But Scuttlebottom caught the youth’s gun hand. Squirming, kicking, the thug jerked frantically at his wrist. The gun swiveled about to line on Scuttlebottom’s sweaty head. Reflex action made the thief squeeze the trigger.

There was a nasty *crack!* Scuttlebottom’s face dissolved in a gout of blood, and he slumped sickeningly to the pavement. The young thug took one look at the fresh corpse and passed out cold.

That was how the police cruiser found the two of them half a minute later, when the car came screaming to the curb in answer to the shot

“You’re lying!” the burly sergeant was snarling, and he made a pass at the youth.

Scuttlebottom’s killer took the slap across the face, but he was crying anyway.

“I did not!” he sobbed. “I didn’t kill him! *I thought the gun wasn’t loaded*”

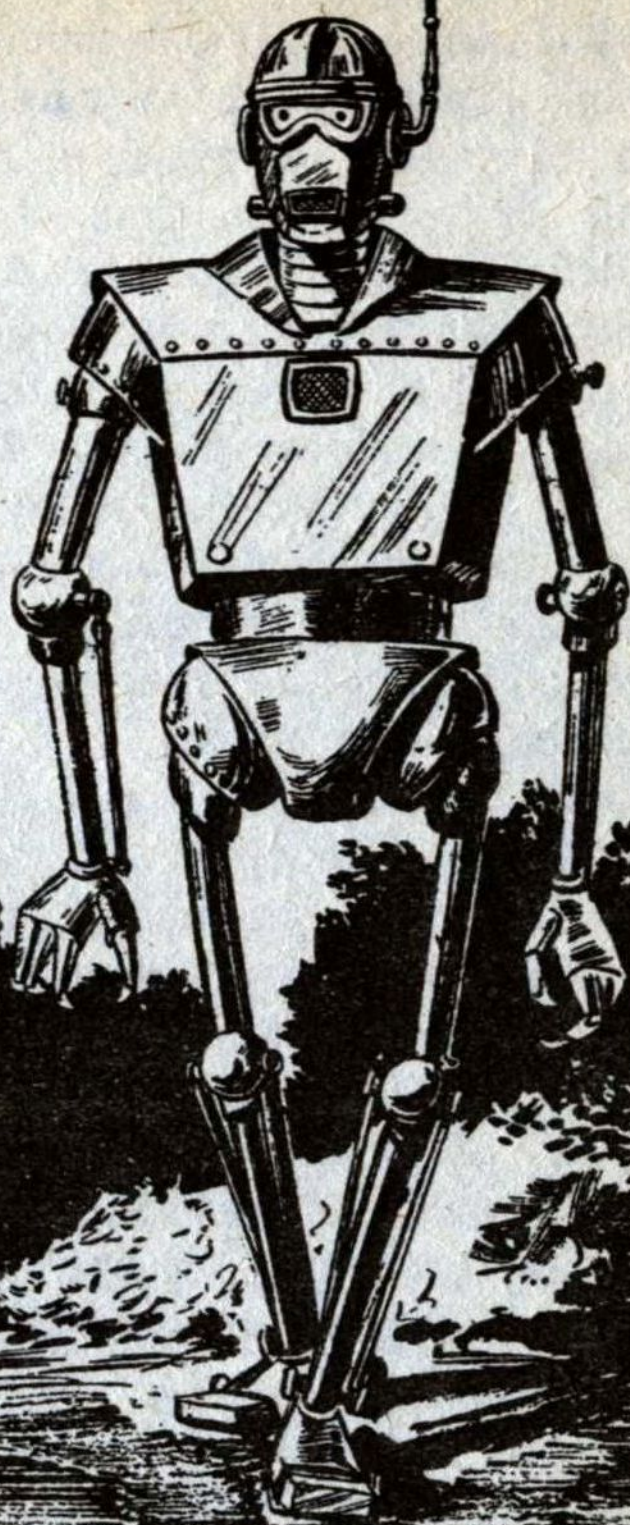
The End

On Your Newstands Now -
THE MOST THRILLING SCIENCE FICTION EVER TOLD

THE METAL MARTYR

By **ROBERT MOORE WILLIAMS**

Illustrated by **EDMOND B. SWIATEK**



*If you like robot stories—and we haven't yet met an s-f fan who doesn't—we recommend that you hunt up a copy of *The Robot and the Man* (Gnome Press, 1953), a sterling collection of top stories on the theme, two of which—"Robots Return" and "Burning Bright," both by veteran author Robert Moore Williams—are so good that we're glad we can offer you another one in the same vein. This one—"The Metal Martyr"—is about Two, an all-purpose robot suffering from an odd delusion. He thinks he is a man.*

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TWO was never able to remember exactly where or when it had happened or what he had been doing at the time. Like snowflakes and fog and the south wind, some things come so quietly that the senses miss their coming. New ideas are like this. For a long time the mind is blank, then suddenly there is the new idea, the new thought. No one knows how the thought came or exactly when it came.

It was like this with Two. The new thought came. With it came a feeling of wrongness, as if something was out of place, out of joint. He stared around at the robot city. Here in this small cluster of stone buildings set among low hills with the high mountains forming a backdrop in the distance, he had been created and had lived all his life. To him, it was home. He knew no other existence. But now, with this new idea strong and vigorous in him, this existence was alien, this place was not home. He belonged somewhere else. All robots belonged somewhere else. With the sense of wrongness strong within him, he went immediately to the Master Technician.

"I am not a robot," Two stated. "I am a man." This was a new thought, this was his new idea.

The Master Technician sighed. His number and his name was Eight. He was in charge of all

robot activity. There were seventy-nine all-purpose robots. There had always been that many, there would always be this many. This was one of their laws, no one knew why. If a robot was damaged beyond repair, if the insidious disease, rust, ate away vital parts, if the other grim disease, green corrosion, crept into the electronic brain, spreading slow but certain destruction with it, the ailing robot was destroyed and another was constructed to take his place and his number. It was one of the duties of the Master Technician to determine when this was necessary.

Looking at Two, the Master Technician knew instantly what was wrong. Two was delusional. Something had happened inside his brain, some minute change had occurred, some electronic synapse had taken place where no synapse was supposed to occur, with the result that Two thought he was something else. Robots rarely became delusional. The brain substance, constructed according to the ancient pattern, held firmly to its rutted pathways. But occasionally something went wrong, as it had gone wrong now. Well, perhaps something might be done to correct this odd delusion. If not—

"Look at yourself and see what you are," the Master Technician said.

Obediently Two looked at him—

self. Reaching down to the stone floor of the Master Technician laboratory, he saw two sturdy legs covered with a tough, rubbery plastic that was impervious to water and to most acids, legs cleverly constructed and jointed so that he could walk or run, or even dance, if the impulse struck him. Legs he had, because legs could walk where wheels could not run and wings could not fly; arms he had, with jointed fingers to hold tools. He had two eyes and two ears because seeing and hearing were necessary to him, but no nose and no mouth, because he did not breathe oxygen or eat food. Small but very powerful long-lasting batteries supplied his energy. He was equipped with a high-frequency, compact radio for communication over short distances. Housed in his head was the brain substance, which directed all his activities.

"My body resembles that of a man," Two stated, after looking. He had seen a man, once, in the mountains, and he knew how they looked. True, he had only had a glimpse of the strange creature fleeing in wild fright, but a glimpse was all he had needed.

"What of it?" the Master Technician answered, irritated. "You are an all-purpose robot. Man is an all-purpose animal. Two forms which serve the same purpose will probably resemble each oth-

er, at least outwardly. That is logic."

Two shifted his weight from one foot to the other. No robot ever sat down to rest, there was no need for it. He and the Master Technician were standing. There was logic in the Master Technician's statement. But—

His thinking was perturbed. About him somewhere was a feeling of failure, as if something had gone wrong, some experiment had failed, some assigned task had been neglected.

"I know I look like a robot," he said. "But I am a man."

"Why are you a man?" The Master Technician demanded. He was becoming impatient. "What makes you a man?"

"I feel I am," Two answered.

"You feel you are!" Robots were creatures of logic, they followed the rules of sine and the cosine, the laws of chemistry, of electricity, or weight, pressure, and of force. "There is no such thing as feeling!"

"I know," Two said. "But—"

"Get this delusion out of your mind," the Master Technician said. "Or we will have to disassociate you."

Disassociation meant that the body was dismantled and the brain case removed, after which the brain case was dissolved in acid. Two was silent. Whether it could happen or not, there was a new feeling in him now—rebel-

lion. It rose as a small murky cloud of anger in the back of his mind. "Then let it be that way," he said.

"What?" The Master Technician's photo-electric eyes came as close to registering amazement as was possible for such orbs.

"And to hell with you," Two said. Balling his hand into a fist, he punched the Master Technician in the eye.

The Master Technician fell over backward. He was too surprised to do anything else, though later other courses of action would occur to him. Two did not intend to be around then. He ran. His intention was fully formed in his own mind.

He was a man. Like seeks like. He was going to his own kind, to men.

There were not many men, he knew. Perhaps, like the robots, their numbers were restricted to seventy-nine. They lived in the mountains to the west. The robots did not seek them out and they did not seek out the robots. Between them there was a sort of armed neutrality and each pretended the other did not exist.

"I will go to my own kind," Two thought. "They will accept me for what I am."

All day long the sturdy little metal figure trudged westward, following his delusion. He crossed rivers, he climbed hills, he found his way through for-

ests where the trees grew tall and thick. The gray wolves of this land sniffed at his heels. He ignored them. The great cats sleeping on the rocky ledges looked down at him as he passed, their ears flattening against their heads. He did not see them. He was seeking man. He came to a high tableland and climbed over piles of rubble that had once been a city a thousand—or was it ten thousand years ago—and to him the piles of rubble were only obstacles in his path. When night came, he turned on the powerful light placed in his forehead and continued the search. In the middle of the third day, he found—man.

From the top of a hill he saw them in a little valley below, two men, clad in deerskins. They were standing beside a little river. In their hands they carried strange objects of bent wood. He moved toward them. They saw him as soon as he came in sight. Instantly they grasped the strange objects in their left hands.

"What the hell is that thing?" Bill Argo asked.

"I don't know," Ed Chiswell answered. "I saw one of them once but I didn't stick around to find out what it was."

"Let's get out of here," Argo said.

"No. Wait," Chiswell protested.

"It wants to talk to us."

Their bows ready, the arrows on the string, they waited doubtfully. At the sight of Two, uneasiness moved in them as if each remembered an ancient enemy. As Two came closer and closer and they saw all too clearly his strangeness, the uneasiness grew in them. Suddenly Argo drew the bowstring to his ear and released the arrow.

The shaft struck Two a glancing blow on his metal chest and bounced off harmlessly.

"Get out of here!" Argo shouted, and ran.

Ed Chiswell stood his ground. Men ran from the great wolves, from the bears, from the cats, men ran from the thunder and the lightning. But *he* was tired of running. Here, in this creature coming toward him, was something new, something different. Any new thing would be an improvement over the life he knew now, he thought.

Two hardly knew the arrow had struck him. He did not grasp its purpose. The delight at meeting his own kind was a feeling of great joy in him. "Hello," he said.

"Hello," Chiswell said. Fear was in him, but he stood his ground. What was this black creature that looked and walked and talked like a man? "What are you? Where did you come from?"

"I am a man," Two answered.

"I came from back there." The wave of his hand indicated the foothills to the east.

"You are a—" Chiswell caught himself. He saw instantly that this strange creature was suffering from some form of hallucination. Men sometimes imagined they were something else. This black creature imagined it was a man. Chiswell began to ask questions. What was his name? Where did he live? Were there others like him? Two answered readily and eagerly. From his answers, Chiswell got a clear picture of the robot city and the robot way of life. A feeling of tremendous mystery rose in him. What was the origin of these creatures? For that matter, what was the origin of man?

Unlike most of his fellows, who had little time left over from the grim business of finding enough to eat to waste any of it in wondering about such remote problems as origins, Chiswell found time to wonder and to think. Here was a new problem. He sensed that it fringed a great mystery. "Will you come back to the tribe and live with me?" he said.

"Of course. That is what I want most." Two was almost pathetically grateful. He had been accepted as a man!

"Will your fellows search for you?" Chiswell asked. It was an important question. Not know-

ing what powers might be housed in Two's metal body, he wanted to take no chances of leading robots to the hiding place of the tribe.

"My fellows?" Two was hurt. He saw that he had not really been accepted as a man, that this man was humoring him, perhaps for purposes of his own.

"Sorry," Chiswell instantly apologized. "I meant, will the robots search for you?" He intended to take no chances of losing, or angering, this creature. Two knew many things that might be of tremendous value to the tribe. The robot bodies were made of metal. This meant they either had access to a supply of the hard-to-find ore or they knew some other secret for finding it. The tribe needed metal desperately. In fact, they were beginning to use stone again, simply because they could not find metal. If Two could teach them this one secret, any danger they might run in befriending him would be worth the risk.

"Let them search," Two said. "They will never find me." He felt a little better.

"Come with me," Chiswell said.

They went up the mountain together.

Two had found man and man had accepted him as a friend. But it was something of a shock to

him to realize that man went clothed in the skins of animals, that he carried a device of bent wood with which to kill other animals, and that this man, somehow, was afraid. Although he knew little about men, in the depths of his mind he had always thought of them as being giants, great creatures who ranged the earth unafraid, taller than mountains, greater than gods. Again he was shocked, this time at himself, to find himself thinking of gods. Robots had no gods. But men have them, he thought defensively. And I am a man.

"Here is where we live," Chiswell said. He pointed to a small hole at the base of a high cliff, moved toward it. Men lounged around the entrance. One of them rose to his feet and shouted. It was Argo.

"Wait here," Chiswell said. "I will talk to them."

From a distance, Two watched the conference take place. Angry voices rose, shouting that Two could not enter the cavern, that Chiswell was a traitor who had brought danger to the tribe. Chiswell was patient. He kept urging some course of action, kept pointing toward the waiting robot. Little by little the anger died out on the faces of the men. "Go talk to him," Chiswell urged. "See for yourself that he is harmless."

The men came forward reluctantly. Two answered their questions with patience. They did not understand him. Nor did they trust him. But Chiswell's patient urging won grudging acceptance for him. They admitted him to the cavern. As they passed the entrance, four men immediately rolled a huge stone into place, blocking the exit.

"We do that to keep out the wolves and the bears at night," Chiswell explained.

The cavern was a vast, single room. Fires gleamed dully around the walls and the air was heavy with smoke. Inside the cavern were other men, some of them the strange kind of man called women, and little ones called children. Reassured by Chiswell, they clustered around Two, their voices rising like the chattering of birds.

"Who are you?"

"Where did you come from?"

"What are you?"

"I am a man," Two said with dignity.

They didn't dispute him but a child laughed uneasily, and the group drew back from him. "Inside I am a man," Two repeated.

"Inside or outside, what difference does it make?" Chiswell said. He went quietly from person to person, whispering. The group was uneasy. They were men. Two was—something else. The question was—what?

He sensed their uneasiness. What if they were tricking him? What did he know about men, after all? He looked toward the entrance as a sudden thought moved in him but the big stone blocked the exit. He could pull it aside perhaps, but —

A voice rose. "He's made of metal. I say we cut him up and use the metal for knives." Argo's voice.

"No!" Chiswell shouted. "Shut up, you fool. No, Two! He doesn't mean it. I won't let him do it. Argo, you hopeless fool! Two, stop!"

Two was running. He had heard what they intended to do with him. Perhaps Chiswell did not wish to do this thing to him, but Chiswell was one and the others were many and they could brush Chiswell aside and pull him down. Panic moved in him and he ran.

He did not run toward the exit. The guards and the stone were there. He ran blindly across the cavern, turning on the light on his forehead to mark the way. The bright beam flashed out, revealing a dark opening across the cave. Feet pounded behind him, voices shouted. He turned his head and the bright beam of his light flashed into the eyes of the men, blinding and frightening them. They had never seen a light like this. The only light they knew came from the sun,

the moon, and the fires that burned continuously in this cave. They shrank away from the light. Two ran on, unpursued.

In his mind was turmoil. Men were creatures of dark treachery, black liars, and false friends. The tunnel closed around him. When no pursuit sounded behind him, the panic in his mind began to die down. "Men!" he thought. "I must get away from this place. I must go back to the Master Technician and confess my error." His mind had been jarred back to normal channels. He was a robot again.

He did not know how big this cave was but somewhere there must be another exit, he felt. The tunnel turned, then moved ahead again, arrow straight. The straightness of the walls caught his eye and he realized that this was not a natural cave. "Perhaps this was once a mine," he thought. "Perhaps, when the ore was exhausted, they abandoned the mine."

Metal was precious to robots too. Their city was located over a source of raw iron ore. They had mines in the mountains to the far south, where they dug copper, lead, and other metals. But all metals were very hard to find. Sometimes they found huge excavations from which all the ore had been taken, like this one. They assumed that their ancestors had dug these mines.

They were vague about time. If a thing happened yesterday, or last year, it was the same time to them.

Two was certain men had not dug this tunnel. How could men dig anything?

The tunnel opened into a round chamber. Here the roof had caved in, marking the end of the passage. Or so it had been for men. Tracks in the thick dust revealed that men had been this far, though not recently. Where men had been stopped, Two went on. Logically, there had to be a tunnel out of this chamber. He dug down through the fallen rock until he found it. Feeling completely safe from pursuit, he went on. In an alcove off the main tunnel something caught his eye.

"A machine!" he thought.

He, and all robots, felt a sort of kinship with all machinery. Machines fascinated them. He stopped to study this one. Even though its parts were pitted and falling away into fragments of rusted, diseased metal, its essential function was clear. "It's an air purifier," he thought. "But—

Although this was certainly an air purifier, robots, having no need for air, could not have built this machine. Who, then had built it?

In his mind, Two felt a sudden dizziness. A machine to purify air had no reason to exist. But here was one. It had been con-

structed in some yesterday that his mind could not fathom and it had sat here and rusted away with disease for—how long?

Traced in the dust beside the machine was an outline, a pattern of slightly raised ridges which, at first glance, was almost as mystifying as the machine. Poking into the ridges, Two found a fragment of bone and realized the nature of this pattern.

It was the skeleton of a man, perhaps a man who had once tended this air-conditioning machine and who had died beside it.

A dead man beside a dead machine! Two could not believe what he saw. "Perhaps the man came here long after the machine ceased functioning, before the roof fell in the round chamber—" he thought. It was a possible solution but it did not satisfy him.

"But men know nothing of machines," he thought. The feeling of mystery rose in him. He rose to his feet, moved down the tunnel. There were other machines!

There was a huge room full of them! Machines for transforming electricity, the vast hooded bulk of a machine for converting heat energy into electrical energy—And skeletons!

But nowhere was there the rusted body of a robot. Nowhere was there any sign that robots had even been here!

"Men could not have created these machines!" Two thought. "They could not!"

He continued exploring. There was a huge room, the walls lined with shelves, and the shelves filled with books.

All robots were conditioned to read. It was a part of their training, and though they had little use for reading, they continued the training as they continued everything else, by rote.

On a metal table in the center of the room was a thick volume. On the floor beside the corroded table was a skeleton. A book and a man who had read it, perhaps a man who had written it.

Two brushed the dust from the book. The pages were a plastic that would last an eternity. Perhaps this book had already lasted an eternity while it waited for someone to come along and read what was written on its pages. Two read the words.

He stood transfixed. Here was the history of this cavern and of the race that had built it and here, too, was the history of the robots.

Men had come before robots! The thought dazed him. The robots had told each other that they had always existed. This solution had satisfied them. But it was not a true solution. Here in this book was proof that men had created robots, that they owed the debt of life to men.

"Not such men as those!" He was thinking of the man near the exit of the cavern, of Argo, and of Chiswell, and the others. They knew nothing of robots, certainly they did not have the knowledge to create them.

The book had the answer to this problem too. Other men had created the robots in the days of man's glory when he had walked as a giant across the earth, his head taller than the mountains. In those days he had mastered every science, he had known all knowledge. Or almost all knowledge. The book told of the knowledge man had lacked.

He had not known how to control pestilence, famine, flood, war, drought; most of all he had not known how to control the slow wasting away of natural resources in minerals and soils until not enough of either was left to maintain the civilization he had created.

Two saw now that the ancient mines the robots occasionally found had been dug not by robots but by men, searching out the last scrap of ore on the planet.

Nor had man known how to control himself. When the time came that there was not enough for all, war to the death had begun, over the remaining minerals and lands, over something for his belly, shelter for his head. Then—pestilence again. A new disease had arisen, an insidious germ that broke the

hearts of the doctors, that evaded the antibiotics, that swept like fire from group to group.

"Here in this cavern we conquered that virus," the ancient man had written. "Less than a hundred of us were left when we isolated the germ and learned to control it. Then—fate played its last trick on us."

What new plague had come, Two wondered, what new stroke of ill luck had risen to strike down the last remnants of a race? The book had the answer.

"Our robots deserted us," the words said. "They ran and repaired the machines in this cavern, each doing the work of twenty men. Through some defect in the brain substance one robot got the idea they should be free. They left us when we needed them most, when at last a new hope of life was opening before us.

"Cursed be the word Robot. Let this be a warning to all generations to come, if such there be. If they had remained faithful, we would have survived, but with their desertion comes the end of man. Cursed be their name forever and forever!"

There the writing ended. Two stood silent. Here was the story of the origin of the robots and here too was the story of a monstrous treachery. Somehow, somewhere, the basic factor of loyalty to man

had been left out of one robot, with the result that the group had deserted.

In Two there moved a new feeling, one he had never known—the feeling of shame. His kind had been unfaithful; in his hour of desperate need they had deserted their creator. What had happened after that, he did not know. Probably the deserting robots had hid all memory of their defection from themselves and when they found ore and began to fabricate new robots to replace the ones who wore out, they did not include a knowledge of their treachery in the conditioning of the new brains.

Nor would they be willing to accept their villainy now. He could hear the Master Technician's voice rise with outraged indignation if this book was brought to his attention.

"Lies, distortions, untruths!" the Master Technician would say. "Disassociate him."

"But men still exist," Two thought. "I have seen them. This book is wrong."

The book was not wrong and he knew it. The men who still existed were the descendants of the group that had lived here in this cavern. Or perhaps they were the descendants of other small groups that had survived the virus.

Obviously, for generations men had followed a difficult trail. Perhaps on his way down from civilization, he had retraced all the for-

ward steps he had once taken, and had become again, as he once was, a few scattered roaming families who had forgotten their history and their origin. The men up in front did not even know that this cavern existed.

Men had slept away the generations, but while they slept something had happened. Raped Earth had renewed herself, the forest had grown tall again, the meadows were green, the water flowed clear and sweet in the many streams. True, the metals were gone forever, but Earth herself was again ready for new life.

"They could use plastics," Two thought, "If they knew how—"

He knew, then, what he was going to do.

The middle of the night had passed when Two returned to the cavern. His shouts awakened the sleeping men. "Come here!" he called. "Come and learn your history."

At first, they thought they were being attacked. Bows were hastily strung, clubs grasped. The women and the children ran for cover.

Ed Chiswell raged among the men, telling them not to be fools again. "Listen to what he has to say," he ordered. They listened.

First, Two told them what he had discovered. They turned awed glances in the direction from which he had come, curious

glances, wondering looks. Then he showed them the books. "Come close to me," he said.

All the rest of the night, he labored with them. At first, what he wanted was difficult for them to grasp. They had forgotten reading, they had forgotten everything. He was patient. The women and the children came out of hiding. Little by little they began to grasp the idea that something of importance was concealed in the strange marks of these odd things he called books. Chiswell sweated hard trying to understand but the children got the idea first. There was one nine-year-old boy whose eyes were alive with eager apprehension.

By the time the first false lights of dawn were in the sky outside, a dozen of them had the idea. True, they could not read yet, but they had sensed the importance of this strange magic. Two had the feeling that they would never give up until they had solved the problem of the books. Especially the nine-year-old boy would not give up, nor Chiswell. His task somehow was made easier by a strange phenomenon that he did not try to understand, the fact that something in these people seemed almost to remember the meaning of writing, and the importance of it. They were learning a new thing but they learned it in the manner of men who are not learning, but are remember-

ing a fact known long before.

A shout came from the guards at the entrance.

"There are robots outside, searching."

The cavern was instantly quiet. Argo's eyes fastened on Two and a hard look came into them. "If you have betrayed us—"

"Shut up!" Chiswell said. "What does this mean, Two?"

Two rose to his feet. "It means I must be going," he said.

"To betray us?"

"No. To save you. And to pay a debt."

At the entrance he moved the stone aside. "Replace the stone after me and stay in the cavern until all is safe outside for you to come out," he said.

"But wait—" Chiswell said.

"Goodbye," Two answered.

He moved down the hill.

The searching robots found him, took him.

In his laboratory the Master Technician was waiting. "Well, Robot Two?" he challenged.

"I am a man," Two answered. There was pride in the way he spoke, pride in the way he lifted himself to his full height, as if here and now an ancient debt was being repaid, an ancient slate wiped clean.

"I am a man," he repeated. "Some day you will answer to my sons for what you do to me here."

It was lunacy, of course, but as

the acid bath closed over the brain case, blotting out the identity of Two, the last thought in his mind was of that day in the future when the men in the cavern would emerge again, armed with an old knowledge, perhaps not seeking vengeance but certainly seeking

their place in the sun. That would be a great day, worth dying for, when his sons came out again into the light of the sun, to stride again like giants across the surface of the earth, their heads taller than mountains.

The End

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STOP OVER IN SPACE

MURRAY LEINSTER

Illustrated by GRAY MORROW

Synopsis of Part One

When Lieutenant Scott of the Space Patrol arrives to take command of Checkpoint Lambda—a reconverted space-liner now serving as a space-buoy in orbit around Canid Lambda—he is at first refused permission to come aboard but manages to do so anyway, only to find the checkpoint overrun by pirates who have slaughtered all of its crew and passengers—except a girl named Janet, who is being forced to pose as a nurse.

At first the pirates try to convince Scott that all is well, but he easily sees through their deception and guesses at the real reason behind it. They are planning to capture the Golconda, fabulous treasure ship scheduled

to make port at Lambda sometime soon. Scott also learns that the pirates themselves are divided, for the authority of the weak-willed hotel manager Chenery—who masterminded the plot—is being challenged by the murderous Bugsy—who is stunned to learn that only Scott can give the recognition-signal when the Golconda arrives.

But Scott is faced with a problem far greater than attempted piracy, for Lambda is on a collision course with no less than four of five comets converging on the sun Canis Lambda, and unless he can take action fast, in a matter of hours everyone on board the checkpoint is doomed to die in an inferno of meteoric flames!

THE Golconda Ship broke out into normal space. Once more it was light-years from the nearest trace of solidity. The pilot of the peculiar ship—the astroga-tor— was highly expert. It is not too difficult to take a spacecraft from one planet to another in a solar system. There are orbital motions and meteor-streams and sometimes solar flares to complicate the problem, but it isn't really difficult. It's even simpler to take a ship from one solar system to another, with all the quantities of distance and of speed worked out—provided the distance isn't too great. At six or seven light-years one aims accurately and goes into overdrive, for a specific period, with a specific allowance for the fact that the star one aims at has been moving for six or seven years since it emitted the light one aims by. Breakout is usually within a light-week and often much closer than that. There is a nearby sun. It can only be the one intended. One drives for it in one or more short overdrive jumps, and then the planetary system is known and one knows what to look for and where it is. Between nearby systems, astrogation is no great matter.

But the Golconda Ship leaped light-centuries and not for the neighborhood of suns. In such cases, at breakout one doesn't know exactly where he is. The identity of nearby stars isn't

STOPOVER IN SPACE



easily established. Unless there's an ultra-short-period Cepheid close by, one can spend days trying to locate himself. And errors mount up.

So ships normally use space-lanes, duly surveyed and the stars along them fully described, and with check-points and other aids to astrogation. But the Golconda Ship could make no use of them without revealing approximately where it had come from and roughly where it was bound. At this last breakout for observation it was where no other ships ever appeared at all, and it went through a long, complicated procedure to locate itself. Then it refined those results until it knew exactly where it was. But nobody else in the Galaxy did. Then, suddenly, the Golconda Ship vanished.

It was still in the blackness and isolation of overdrive when Scott moved toward a corner of Lambda's control-room. An inconspicuous door there opened on a narrow stairway that led down to the next level and opened in the kitchen of the hotel-restaurant. When Lambda was a liner, this stair was used to carry coffee and such items to the astro-gators, without marching it through the hotel lobby. Having studied its plans, Scott knew even such details about the lobby.

He led Janet down. As they reached the bottom of the stair,

she said, "You haven't any real hope, have you?"

"I don't know," said Scott. "I've been too busy getting things lined up. I haven't had time either to hope or despair. I've been busy!"

"I haven't had any hope from the beginning," said Janet quietly. "From the first moment I've known there wasn't the faintest chance that I wouldn't be—murdered. But one can't stay really terrified for very long. The emotion wears out."

They reached the bottom of the stair.

"Then unwear it," commanded Scott. "I need you to take care of a situation for me. Come along!"

He led the way, through the kitchen and past plastic-topped tables where food was prepared. He headed for another corner, where there was another doorway. It had been provided for the serving of drinks and snacks in the hotel-lobby area. It wouldn't be conspicuous from there.

"This will be a bet," he said over his shoulder. "I'm going to set up a gamble with fate or chance or destiny—all of which have been known to cheat. But I'm going to ask you to try it."

"What's the gamble?"

"An extension of the privilege of breathing," Scott told her. They neared the other door, now." And a long-odds-against,

outside chance of ultimate survival. That's what you gamble for. What I have to put up is simply getting the buoy through the comets. If I can manage that—and I should—you will be very temporarily safe and can attend to something for me."

"I don't understand."

"You will shortly," he assured her. "For now we want to be quiet."

They went out into an alcove of the lobby. It opened almost opposite a door over which there was a lighted panel showing the words *Lifeboat. Do Not Enter*. From here all the lobby could be surveyed. It was empty. There was the tiny theatre, and the wide doorway to the restaurant, and the counter-and-hotel-desk space which made this part of Lambda look so much like an old-fashioned hostelry. There were upholstered chairs. There were carpets. There was reading-matter on a table or two. And there was that visible film of dust which insisted that something was wrong.

It occurred to Scott, absurdly, that if someone did mean to deceive the crewmen of the Golconda Ship before their slaughter, a beginning would have to be made by turning the blaster-men aboard into housemaids, dusting and cleaning and polishing to make these surroundings seem lived in.

But he opened the door under

the panel announcing that it led to a lifeboat. He closed it with care to make no noise. There was a short passageway and another metal door. Scott unlocked it. Beyond, there was a lifeboat blister, and the lifeboat itself, and beyond that the great mussel-shell valves that would open out to let the boat emerge. He adjusted the warning device which so much impressed passengers when it was shown to them. *If* there were need for the lifeboats, the standard explanation said, and *if* a lifeboat was about to open the blister-valves and leave the ship, and *if* anybody was late getting to the boat, then the lifeboat would be notified of any attempt to open the inner door. So nobody would be left behind. And there was a telephone to the control-room, too, in case last-second instructions were necessary.

Passengers were much encouraged by these proofs that everything had been thought of for their safety.

Scott led Janet inside the spaceboat and showed her how to close and dog the port.

"Here's what you've got to know," he told Janet professionally when they were sure she knew that very necessary process. "You unlock this—" he suited the action to the words—"and the boat's ready to leave. Only certificated spacemen carry a key to release the boats. Then

if you throw this lever"—he illustrated—"you'll be out of the blister. You're only to do any of this or anything else I show you when there's nothing else to be done. It won't be suicide, of course, but it's definitely a last resort. Understand?"

She nodded. He went on curtly: "This is the drive. You want to remember that in a space-boat you use a drive to get going, and you use reverse-drive to stop, but you don't use drive to keep going. You won't stop! If you want to drive to another boat, or a ship, or what not, don't aim straight at it. You could crash. It's likely. Instead, aim to pass it close by. As you pass, you brake with reverse drive. That's the way to become still with relation to it, and close. Then—"

He lectured. Precisely. Lucidly. He gave details. He made explanations. Once or twice he drew diagrams in the dust that lay thinly over the interior of the spaceboat. Janet listened with a peculiar expression on her face.

He made no faintest attempt to instruct her in anything but the use of the lifeboat as a survival device while awaiting rescue. But in that context he did explain, over and over, how to approach an object in space and make fast to it with the space-boat's magnetic grapples. All the while, though, he was wily aware that the usefulness of this instruction would

depend entirely on what he managed to do elsewhere.

Presently Janet said quietly, "Only a ship's officer is supposed to handle a spaceboat. You're teaching me, though you're only Patrol. While I'm doing it—what will you be doing?"

It was a matter of interest only to Janet. The galaxy as a whole was interested in other matters. On a large scale suns blazed in emptiness and novas flamed and comets—including the Five Comets of Canis Lambda—rushed furiously through space upon errands that seemed pure futility. On lesser scales, cargo-carriers were lifted from space-ports to where they vanished like burst bubbles, and passenger-ships landed, and children attended school. . . . But practically nobody thought about Checkpoint Lambda.

Even the space-buoy's present population didn't especially think about it. Bugsy's men, and the fewer who had followed Chenery, were gambling in the crew's quarters. They were concerned with how cards ran and dice rolled. Chenery was an exception. He craved to be smarter than anybody else. He'd designed this enterprise. He hadn't wanted violence to be used, but only the threat of it, because that would make him smarter and cleverer and more certain to be admired.

He was concerned with the future of the buoy. He was on it. Also, if it wasn't destroyed within the next few hours, he had some claim on the yet-to-be-secured treasure of the Golconda Ship.

Bugsy's thoughts about the buoy were more confused. It was part of his character that he counted on one kind of solution for all possible problems. He had a violent mind. Where Chenery saw an obstacle as something to be outwitted, Bugsy searched among possible forms of violence for one with which to smash it. Because the capture of the space-buoy might have been hampered by someone getting suspicious while it was being done cleverly, he turned that capture into a massacre. Because the Golconda Ship might avoid even the cleverest of deceptions, he intended to make it butchery. And he didn't quite believe in danger from the Five Comets because human violence simply couldn't be applied to them. But, within limits, he thought of Checkpoint Lambda.

Janet appeared to think of it, and yet not to. Scott had explained—slurring over the touch-and-go moments—what he would be doing while he tried to make it unnecessary for her to drive a lifeboat out of its blister and to the place upon the errand he'd assigned her. If she had to do that, and kept her head, and re-

membered all of his instructions, she wouldn't be safe. But her danger would be impersonal, with no malevolence and in a sense no horror. And if she didn't live through it, she'd lose relatively nothing, compared to dying in Lambda.

"I'll try it," she said soberly," but I wish you were going to handle the space-boat."

It was true. Scott had arrived on the buoy only hours ago. He'd never called her by name. He didn't know more than that her first name was Janet. But he'd accepted the task of protecting her without comment or question, and she'd accepted his protection without doubt or demur. And it seemed completely natural to both of them. It's the instinct of a man to feel responsible for a woman in an emergency, and it's the instinct of a woman to turn to a man in time of trouble. That is the way people are made. Some of them don't like it, but those who do are lucky.

"What happens now?" she asked. "Now that I'm qualified to run a space-boat?"

"I go back to the control-room," he said. "And for the time being I do nothing—if possible. But Chenery or Bugsy may do something. So I have to be ready for anything."

He moved to leave the space-boat.

Janet said gravely, "Thank you. For the chance you've given me to—to—"

He shrugged. "It's not a very good chance. But there aren't many women who could make it a chance at all. I think you can."

He went out. He listened painstakingly at the door beneath the sign that said *Lifeboat. Do Not Enter*. He heard nothing. A little later he went into the lobby, as a steward might have done, serving drinks to passengers.

A little later still he heard noises down the grand stairway to the three levels of passenger-cabins. They were voices. They were coming up the stairs. There was Bugsy's voice, and Chenery's, and the voice of a third man Scott hadn't heard before.

This third voice said confusedly, "*Wha' th' hellsh th'matter? Why'n't you let a fella shleep? Le'me alone!*"

There was the sound of a blow and a cry, "*Ow.*" Then Bugsy's voice, rasping horribly: "*Come out of it! Come out of it! Or—*"

Chenery protested, *Let me handle him, Bugsy!*" Then he said encouragingly, "*Not much more, Joey! Then you can sit down. You got to sober up, and fast, but you can do it! Come on, now, up the steps*"

Chenery and Bugsy appeared at the top of the steps. Between them they half-assisted and half-carried a disheveled man whose head

tended to loll to one side. They got him up to the hotel-level floor. When they reached it, Scott was sitting in an upholstered chair as if he'd been there for some time. He put down a magazine, with his finger in it as if to keep a place.

"What's this?" he asked mildly.

Bugsy glared at him. Chenery struggled to hold the sagging third man upright. His attitude toward Scott was anomalous. Scott was Patrol, and he knew that Chenery was ultimately responsible for the murders on Lambda. But Scott had left him armed, and Chenery believed what he said about the nature of the constitution of comets.

"He's the engineer we brought," said Chenery with some difficulty. "He was a spaceman, but he lost his ticket. Bugsy wants to check on what you say about the comets. He's stayed drunk since—you know when—I mean him," and Chenery quite needlessly made it clear that it was the engineer and not Bugsy who'd stayed drunk. "We want him to see the comets."

"A good idea!" said Scott. "I'll let you into the control-room."

He crossed the lobby and went ahead, up to that part of the ship which was especially Space Patrol territory in the buoy, because it was where observations were made. From it, too, all commun-

ication was handled, even the purely mechanical checkpoint call for ships to report, and the high-speed recordings the call elicited.

He unlocked the door in a manner suggesting cordiality. He helped Chenery get the stumbling, still-intoxicated man inside and to a seat.

Chenery mumbled anxiously, "Where's Janet?"

"Resting," said Scott. "I hope she's sleeping. I found a place for her where she shouldn't be disturbed. She's pretty well worn out. She hasn't had an easy time of it."

The seated man seemed to be about to go off to sleep again. Scott rocked his head back and forth between his hands. It wasn't painful, but it couldn't be endured. The disheveled engineer struggled to escape. He started up confusedly, half-way out of the chair.

"Look!" said Scott sharply, holding his face toward the screens. "Look! Comets! We're running into them! We're going to smash into them! Look!"

The engineer looked. His eyes were bleary, but they cleared as he looked. And then Scott had the unusual experience of seeing a drunken man going cold sober before his eyes.

The first sign of it was that his drink-flushed face lost color. His hands, which had pushed vaguely to escape Scott's and Chenery's

graps, now steadied and closed into fists. His pose lost its slackness. He straightened. And all the time the color continued to drain from his face until it was left a terrified grayish tint.

"Gaw!" he gasped. "Are we runnin' into—that?"

Chenery said disturbedly, "They're bigger than they were, Buggy! They're bigger! You can see! we' nearer—"

Buggy snarled.

"You!" He was so enraged that he made inarticulate sounds before he could pant furiously, "They're comets, yeah! We're runnin' into 'em! Yeah! What are they? Gas or what?"

The unnaturally sobered engineer trembled.

"They're rocks," he said, shaking. "The size of y'fist. The size of houses! Mountains! They're all sizes! What they hit—ain't! We got to miss 'em somehow! We got to—"

Scott said coldly but somehow approvingly, "You're a space-man, anyhow! It's up to you. Buggy wants to miss them as much as you do!"

Buggy beat his fists together. He had a violent mind, and to him the answer to any emergency was violence. But even he knew that nothing men could do would conceivably destroy or injure the comets. The nearest of all was a glowing globe some tens of thousands of miles in diameter.

There was a smaller one, perhaps not more than a fifth of that size. Then there were the twin comets, almost as big as the first, and the fifth one closing in from an angle which showed its incredible shining tail reaching out toward infinity.

"Then do somethin'!" shrilled Bugsy. But even in panic he raged. "Do somethin' fast or—"

"We've got probably an hour and a half," said Scott composedly. "More or less, of course. Have you thought up a deal to offer me, Bugsy?"

"Do somethin'!" shouted Bugsy at the engineer. "You do somethin' or I'll burn you down!"

The sobered engineer reached out his hands to the control-board. He turned a handle. There was an infinitely small lurching sensation. He turned another, and it repeated. And the objects on the vision-screens moved visibly and as groups to one side. The seemingly stationary areas of mist—but they had doubled in size since Scott came aboard—appeared to flow sedately to the right until they showed on the starboard bow-quarter screen. The masses of stars and portions of comets on the port bow-quarter screen flowed onto the dead-ahead screen. A curious sensation of suspense developed as the ship continued to swing. Presently a portion of the Milky Way appeared where only a little time

ago there had been only the Five Comets.

Lambda, obviously, was turning in space. But it was not driving. It stayed in its orbit, traveling at what would have seemed incredible speed had there been any stationary object to measure by. But the marker-asteroid shared the buoy's velocity. It was less than two miles away. It had no gravitational pull to speak of. If it drew the buoy to itself, it was by fractions of an inch in weeks of time. Marker and space-buoy went on together in a sort of blind companionship toward the meteor - storm - meteor - hurricane—meteor-typhoon, which was flinging missiles like some cosmic rapid-fire gun, aimed like a hunter's shotgun, to lead its target and secure a perfect destructive hit.

Because the buoy was only turning. It had four steering-units in its bow, and four by its stern. The shaking, sickened, unnaturally sobered engineer had a steering-unit thrusting the bow of the ship to the left. Another steering-unit pushed the stern of the ship to the right. Still others could lift the bow or depress the stern, and it was possible for both bow and stern to be urged in the same direction so that the buoy could be made to shift crabwise. But that was for use only when a liner made delicate, painstaking contact with the buoy to put on or

take off heavy freight. Now the buoy simply turned until it faced almost exactly away from the spot among the Five Comets at which it had been aimed. The engineer fumblingly reversed the turning controls to stop the swinging.

Bugsy cried fiercely, "Now get goin'! Get goin' away from them comets! There's the marker! Get movin'! Away from it! We got to leave it!"

Beads of sweat stood out on the face of the engineer. He'd kept himself in a drunken stupor from the time of the murders to the time a little while since when he'd been roused forcibly to have a miracle demanded of him. Maybe he wanted to forget what he'd seen when the buoy was taken over. Maybe he wanted to forget what he'd done. He's been sobered, but it couldn't be anything but temporary. Any spaceman knows something about handling a ship, but when a man has been frightened sober, his sobriety doesn't last.

He wobbled, at the control-board. He lurched. With an enormous drunken deliberation he put his hand on the solar-system drive control.

"This-sh," he pronounced owl-ishly," is the drive. The only drive we got. But it'll take ush away —"

He threw over the control.

And nothing happened. The

engineer beamed triumphantly around him, waving a hand as though acknowledging applause. Then he collapsed. He lay on the floor and snored.

The marker-buoy continued to float in emptiness nearby. The Lambda certainly wasn't towing it. It wasn't leaving it. It wasn't doing anything at all. Nothing was doing anything. Even the solar-system drive, which in any case couldn't have built up counter-orbital velocity in time to keep the buoy from destruction—even the solar-system drive wasn't trying.

Chenery said anxiously, "Lieutenant! The engines ain't doing anything!"

"I'd suggest," said Scott in a reasonable tone," that you take this Joey down to the engine-room, try to rouse him again, and see if he can find out what's wrong. He's an engineer. He's your man!"

Then Bugsy found a use for violence, provided he could locate the necessary object for it. His eyes glittered. His teeth showed.

"Where's the girl?" he demanded abruptly.

"Asleep, I hope," said Scott. "She needs it. I found her a place where she won't be disturbed."

"How long have we got?" Bugsy demanded ferociously. "How long' we got?"

"We're reasonably safe for an

hour," Scott told him. "With luck. But we'll be where we can look for punctures of the hull in an hour and a half. In two hours there shouldn't be any compartment in Lambda that hasn't been riddled and the air lost. In three hours there shouldn't be any Lambda. It'll be part vapor and part scrap-metal, and most of it will be going with the comets around the sun."

"An y'won't," panted Bugsy, "y' won't make a deal?"

"You haven't offered me anything I can believe," said Scott.

Bugsy spat at him. Literally. He went out of the control-room. He staggered as he walked, from pure fury. He made jerky, uncoordinated gestures. He disappeared.

Chenery wrung his hands. Very oddly, there were tears in his eyes. Scott regarded him curiously. It was Chenery who'd contrived the enterprise which now was falling apart all around him. He was breaking up with it.

Chenery had wanted to be smart and to be clever, and he'd possessed a cunning which he considered genius. He had a gift for trickery and the devising of pitfalls, and for victimizing his fellows. He'd planned thefts, and they were individual and unique, and he prospered. He'd risen to the masterminding of robberies, and he put a smooth and brilliant polish on their details, and in cer-

tain quarters he became famous. And he'd developed an impassioned ambition to pull off the biggest and cleverest robbery of all time.

And now he was to die of it. He'd contrived the seizure of the Golconda Ship from information he'd gotten by pure accident. He'd drawn Bugsy into the scheme to get the extra needed manpower for his masterpiece. He'd worked out in detail how the crewmen of the Lambda were to be seized one by one—to bear witness later to the superlative brilliance of his planning.

And if Bugsy remained subordinate, he might have brought it off, even considering the Five Comets. Because crewmen who were prisoners instead of corpses would have warned him of the need to leave the Lambda's normal orbit and the asteroid which was the buoy's orbit-companion. But Bugsy had taken over, and now Chenery wanted to cry because his pride was gone and his vanity shattered. What should have been the most brilliant and spectacular robbery since men had possessions to be robbed of, was now turned into a mere brutal, sordid, murder-filled fiasco. The brilliance and the genius were drained away. If the galaxy ever did learn what had happened here, it wouldn't be a romantic Robin-Hood-like tale of wit and daring, but a tale of footpads and killers

who'd murdered their way into a space-buoy to wait for a treasure-ship and by sheer stupidity rode it into the Five Comets. Which riddled it, shattered it, vaporized it, and left all the killers astonished corpses in emptiness.

So Chenery wept. Something on the control-room wall made a distinctive clicking noise. And another. And another. Scott's jaws tensed.

"Take him down to the engine-room, Chenery," he commanded. "I don't think it will do any good, but try it."

Chenery said thinly, catching his breath, "Lieutenant—"

"Here," said Scott. "I'll help you get him on your back. Like this! Hold that arm and get your other arm under his leg. Like this! That's right! You can carry him now."

Chenery swallowed. He was a small man, and the helpless and sodden engineer was not. Chenery was almost hidden under his burden. But he said unsteadily, "Lieutenant, I'm sorry! I'm sorry you came—and Janet. But I didn't mean to get everybody killed! It was going to be a swell—a swell job! Only I—needed some extra men. And it's turned out like this!"

Scott said nothing as Chenery went down the stairs, one foot and leg of the engineer bumping on each step, and across the floor-space below with the engineer's

left foot and leg still dragging.

Scott closed the control-room door. He locked it. He went swiftly to the place from which a clicking had come. It came again. It was a tape-reel which should be spinning swiftly, receiving the ultra-fast broadcast of a ship's log which because of the speed of the broadcast would sound like a rather shrill whine. But this one wasn't. There was another ship out yonder, far from the path of the Five Comets. It had picked up the monotonous checkpoint signal which never ceased to be broadcast. "*Checkpoint Lambda*," it said tinnily. "*Checkpoint Lambda. Report. Report.*"

On any ship but one, that signal would actuate the log-broadcast. But not on the Golconda Ship. It would send a signal composed of a thousand makings and breakings of the log-broadcast frequency. It would make clickings instead of whines come from the recorder-reel. They would mean nothing to anybody, anywhere, except the Patrol officer in command of Lambda. He'd know they signalled the arrival of the Golconda Ship.

The clicks continued. They said—unintelligibly to anyone but Scott—that the Golconda Ship was ready to make port on Lambda. Actually, it was ahead of schedule because of unusual good fortune in locating itself in the enormous void between the stars. It had

fabulous treasure aboard. It had a crew of no-longer-young multi-multi-millionaires, grown bored with riches and finding adventure only in their quadrennial voyages to grow richer still. And now, after six months of this one, they were bored with it.

Scott threw a switch, built into the automatic checkpoint equipment for emergencies. No emergency like this had happened before, but the switch was ready. It cut off the checkpoint taping of its call for ships to send their logs. It substituted Scott's voice on the call-frequency.

"Calling ship," said Scott sharply. "Calling ship!"

He didn't name the ship he was calling. Another passing vessel might pick up the name. He couldn't know when his voice would reach the Golconda Ship. It could be seconds. It was more likely to be minutes. But checkpoint signals were expected to be fairly clear even light-hours from the sun, and log-broadcasts were received from distances nearly as great.

"Warning," said Scott into the transmitter. "Do not make freight contact with this checkpoint at this time. I am Lieutenant Scott, appointed to command it. When I arrived here a few hours ago, I found its original crew murdered and the checkpoint in the hands of blastermen waiting for you to arrive—object, more murders. It

was seized some six days ago. At this moment we are about to drive into the Five Comets, which are crossing our orbital path. When we emerge on the other side of the comets, you may reopen communication. I believe the situation will have changed. But I urge extreme caution."

He paused again.

"There is one passenger, a girl, who survived the murder of the other passengers and the legitimate crew. I very urgently request that you make an effort—taking whatever precautions you please—to pick her up. If you do not do this, please inform the Space Patrol of her predicament. She is —"

He gave explicit instructions for the rescue of Janet. Nobody would be monitoring the checkpoint's repetitious message: "*Checkpoint Lambda. Report. Report.*"

When he finished, he felt the first moment of actual relief since he'd boarded Lambda. He'd made the first crack in the situation that faced him when he came to take command. Now he had only to get through the comets, prevent his own murder when he began the attempt, again arrange not to be killed when he finished it, and then take real command of the buoy. He couldn't be said to have done that yet! After that there'd only be the matter of handling Buggy and Chenery and

their followers—he felt reasonably assured about handling Chenery, though—and then somehow manage to keep Checkpoint Lambda in operation all by himself until some sort of relief arrived.

He didn't try to make plans for all these things at once, of course. In the nature of things some of them would have to be played by ear when the time came. But he had improved Janet's chances of living out her life as she had the right to do. And he had warned the Golconda Ship.

He wasn't too sure about the Golconda Ship, though. He was more or less skeptical—more skeptical as he thought it over. There is a point where money does things to the people who own it. Unpleasant things. The multi-multi-millionaires who were the Golconda Ship's crew did not lead normal lives. Because they were rich, they were lied to by people who hoped to gain by flattering them. They were schemed against by people who would cheat them. They were cajoled by people who would tempt them to foulness and provide partners for the unspeakable, to make a profit out of them. And they had to hire guards lest they or their families be kidnapped or murdered if they did not pay blackmail. Men whose lives are filled with the feverish

attempts of other people to get money from them are not likely to stay unaffected by those attempts. They are poisoned by the suspicions they have to develop. They are warped by the constant need to stay on the defensive. And they aren't often noticeably happy.

In short, the men on the Golconda Ship might act like other men. But it wasn't too likely. Warned by Scott, they might act like rich men, see to their own always-precarious safety, go cautiously away, and politely tell the Space Patrol about Janet and Scott in their predicament in the space-buoy circling Canis Lambda.

And if they did, Scott couldn't really blame them.

But for the moment he felt relieved. And then he realized that to relax too early might be dangerous. There was Bugsy. He was probably convinced about the Five Comets now. But he had one single answer to all problems—violence. He hadn't been able to threaten Scott before. But there was a way.

Scott suddenly realized that there was an exquisitely monstrous kind of violence Bugsy could practice, of which the mere threat and certainly some practice would subdue Scott completely. There was a way by which he could be forced to take Lambda through the Five Comets, and

afterward work desperately to bring the Golconda Ship alongside—contriving explanations for his broadcast as they were needed—so Bugsy could satisfyingly and bloodily massacre its crew, and astrogate that ship wherever Bugsy pleased. And then be killed.

Scott found himself growing tense again. He tried to thrust away the idea that it could happen. But he suddenly berated himself bitterly for not having been more careful, more intelligent, more resourceful. Even that he hadn't killed Bugsy in cold blood when it was possible.

Because Bugsy had gone away from the control-room in such horrible fury that he staggered and stumbled as he walked. And only a little earlier he'd asked where Janet was. And Janet—

Sweat came out on Scott's face as he realized how helpless he was. Bugsy couldn't be stopped from having his men search for Janet. Even now they might be hunting over the Lambda, exploring every nook and cranny, every compartment however small, looking even into every cupboard

Sooner or later they'd think of the lifeboats.

He seemed to hear noises. He wasn't sure, but he believed it. The search was beginning. Where Janet had last been seen.

Chapter 6

There was another small whining sound from a tape-reel on the control-room wall. A passing ship had picked up the mechanical checkpoint call and had sent its taped log for Lambda to record and the Space Patrol to examine in case of need. That ship had gone back into overdrive and away before its broadcast reached the buoy. Such recordings were useful because if that ship were to fail to reach its destination, an examination of its log to the last check-point might reveal the reason for its vanishing and help prevent another case of the same kind. But the system had other virtues, too. At least one meteor-stream spanning the distance between two stars had been guessed at from such records. It was hunted for and found, and was now a charted space-hazard which all ships avoided. And at least one totally disabled ship was found against all probability when its overdrive blew. But its log revealed some questionable instrument-readings, and most of its crew was still alive when a Patrol ship found it.

But there was no record anywhere off Lambda of what might be the trouble there and now. If Lambda disappeared, the liner that had delivered Scott to it would report some eccentricities. If the Golconda Ship picked up Scott's message—and it might,

or it might not—there'd be more information. But there'd still be too little to amount to definite knowledge. The record would show only that Lieutenant Scott, Space Patrol, had gone aboard Lambda to take command. It was his first command. And Lambda had vanished shortly afterward, like the two robot checkpoints before it. Therefore it would be considered wise to avoid the Canis Lambda system, where two checkpoints and a manned buoy had vanished. So six space-lanes would be shifted because it was not practical to avoid the dangers of this solar system—or perhaps because Lieutenant Scott was incompetent. There'd be no evidence for any other conclusion except the possibly garbled message to the Golconda Ship.

Scott didn't like the idea. As a professional spaceman and an officer in the Patrol, he felt that any disaster to anything he commanded should be reported and explained so that it need never happen again. But as a man he considered that there were circumstances overriding even that obligation.

It was now time to act for the preservation of the space-buoy. It no longer had any operating space-drive, of course. Not even a hopelessly inadequate solar-system drive unit. Used early enough, even that could have taken care of the comet problem.

It should have been used. But Lieutenant Thrums had been murdered six days before Scott's arrival and before it was time to use it. Now it was too late. The rest of the buoy's crew had been murdered at the same time, so they couldn't tell Chenery or Bugsy of the coming need to drive ten to twenty thousand miles out of orbit—but thirty would be better—to avoid the comet-crossing. When Scott came aboard, it was much too late for any such common-sense proceeding.

But there was another method of escape that could be tried. Scott had devised it nearly at once. It had never been done, but there'd never been the need or the circumstances existing here. Without overdrive or even solar-system propulsion, Scott proposed to prevent the buoy's destruction.

But he didn't intend to try it if Janet fell into the hands of Bugsy's men.

There are some things worse than dying. Janet could be tortured until Scott obeyed all of Bugsy's commands. If he let himself be killed, though that would make further violence useless, it wouldn't keep Bugsy from trying to take senseless revenge upon Janet for his own inevitable doom. Bugsy's instinct was to violence, but not necessarily to quick murder. If his purpose was to make someone suffer for hinder-

ing his plans, he wouldn't be impatient for his violence to kill. It wouldn't be the death of his victim that he wanted.

Bugsy wouldn't be a desirable person to hold Janet captive.

Scott found his blaster in his hand. He raged. He even took a step toward the control-room door. But that would be playing Bugsy's game. Scott had seen eleven men on the buoy, and far down in the stern near the hospital he'd heard the voices of more. He could guess at fifteen to twenty. Probably a score, altogether. And whatever the adventure tape-dramas picture, one man against twenty is bad odds. If Scott could cut it down—good. But he couldn't throw away his life. It had to be saved for Janet's protection—even if protection could be no more than a merciful blaster-shot. He had to stay alive long enough for that!

There was a scratching at the control-room door. Scott opened it. He had his blaster ready, but it was Chenery, in a tearful panic and breathing in gasps.

"Lieutenant!" he panted. "Bugsy says—do something' to protect—the buoy or—"

"What's the deal?" asked Scott. His tone was rage and sarcasm and, it seemed to him, despair. He changed it. "What's he offering? To commit suicide? That'll be attractive!"

"It's —Janet!" panted Chenery.

Tears did roll down his cheeks. He was terrified beyond description, humiliated past endurance. All his smartness had brought him to the realization that he wasn't smart. He faced destruction with the buoy. If Scott didn't yield, he had less than an hour to live. But if he were spared being destroyed along with the buoy, he was certain to be killed later because Bugsy would see no need to share the treasure of the Golconda Ship. He'd learned it the hard way. Now he had no possible excuse for home, even if all his most desperate desires were met. If Bugsy won in this incredible contest with Scott, Chenery would be killed. If Scott—the idea was preposterous—should win. Chenery would die in a gas-chamber. And the only other alternative was that he'd die when all the rest aboard the Lambda did.

"What's the proposition?" demanded Scott, again.

"Janet—" gasped Chenery. "Bugsy's got his men huntin' her. He's—got a good idea where to look. He'll take the ship apart, if he has to, and—he'll find her! And when he does, unless you—"

Chenery choked. Scott's eyes happened to look like flames, just then. Chenery felt that he was nearer to dying than he'd ever been before.

"Tell Bugsy," said Scott in a voice that crackled, "tell Bugsy to take his men out of my way

and keep them there! I'm going to get Janet and bring her back here. If he tries to stop me, he'll have no chance to live! I'll get the buoy to safety—for the time being! But only after I've got Janet with me! Not before! And then, when we're through the comets, I'll tell him what he has to do next!"

"You'll—dodge the comets?"

"The comets won't touch Lambda," said Scott. His voice grated. "Not if Buggy does what I tell him! Get his men out of my way!"

Such a warning wasn't enough for security while he got to Janet and brought her to place beside him. For that matter, a place beside him could be the least safe place in the galaxy. Yet nobody should dare to kill him. Not yet. Not even after Lambda emerged from the swarming, miles-per-second rushing masses of stone and nickel-steel that plunged to meet it. There was still the Golconda Ship, and after that Buggy's absolute need for an astro-gator.

"I'll—tell him," panted Chenery. "I'll tell him!"

He went away, catching his breath in gasps like a panic-stricken child. Scott closed the door again. Seconds later he was speaking very softly into the microphone that would communicate with any lifeboat up to the instant of its launching: "If you have the switch on, listening,"

he murmured, "Stay where you are! I'm not coming for you! I'm playing for time. It's the timing that will settle everything!"

He heard an indistinct response. He looked at his watch. He looked again at the comets. They filled four vision screens now. They were a monstrous, featureless shining vapor which had no surface. Their identities were lost because of their nearness. Conceivably, if one knew exactly where to look, and at what rate to move one's eyes in which direction, some of the larger solid masses in the mist could have been seen. But there were not many such giants. The shining portion of the comets was very nearly a vacuum. It was probably true that a comet's tail, compressed to the density of breathing air, could be put into something not much larger than a hat. It was of such unthinkable tenuity that the pressure of sunlight itself—to be measured only in tons over the whole face of a planet—pushed the separate gasions of the mist away from Canis Lambda to make comets' tails of it. Each of the Five Comets sported a tail, most of it invisible because Lambda was so close. But it was the solid parts that meant destruction.

Scott glanced at the marker-asteroid, floating less than two miles from the buoy. As he

looked, there was a lurid flash of blue-white flame. Something solid had hit at the marker's edge. Some tiny member of the comets' swarms had made impact on the mile-big mass of steel. It had been travelling at miles per second. When it struck, the shock of its arrival could not travel fast enough to let the miniature thing act as a solid body. It telescoped upon its own substance, like a railroad train in a collision. The metal of the asteroid could not yield. Flying object and asteroid-surface exploded in a flame out of hell, and there would be a minute, new, hollow pit in the substance of the marker. Anything this size wouldn't puncture the steel hull of Lambda, of course. This might be half the size of a pea. But anything half as big as a marble would go through a three-eighths-inch plate. A meteor the size of a baseball could blast a hole by its explosion that would empty a deck-level in seconds. Anything larger—

He threw on the GC phone. He spoke measuredly into its microphone. "Calling Buggy," he said icily. "Calling Buggy. This is to confirm what Chenery will tell you. You're looking for Janet. But I'm going after her. Keep out of my way! If I'm killed, you'll die in forty-some minutes. When she's with me, if you try anything you'll have to kill me first. And

then you'll die in the hellfire this ship will become!" Then he said even more coldly, "Get your men out of my way! If I see one, I'll kill him and you don't dare kill me back!"

Inwardly, he knew a bitter pessimism. He'd almost gotten Janet to relative safety—at least to the point where she'd have a chance in a hundred of surviving until the Golconda Ship picked her up—if it tried. Her chance would be less but still real if the Golconda Ship withdrew discreetly to safety for itself and only reported his message to the Patrol. A ship would come here to investigate, at least, and somebody aboard it might understand how he'd expected her to survive. But she'd have an infinitely better chance if Lambda survived too. And if he did.

The checkpoint at that moment, though, seemed as helpless as anything in space could be. It was a derelict without a drive. Its velocity toward the crossing-point of the comets was unalterable. Chenery blindly believed he could do something—Chenery didn't try to guess what. He'd ceased, though to believe in his own smartness. Buggy might believe in the danger from the comets, but he hadn't stopped believing in violence. And because of that he could still convince himself that Scott was only bluffing. It was touch and go. Buggy was

frustrated to the point where at any instant he could convince himself of anything that allowed him to take violent action; that at least was not frustrated. He could reason that the proof of danger was only Scott's word, and a spreading luminous mist on the vision-screens, and the terror that had sobered a drunken space-engineer when he stared at the comets from the control-room. This was evidence enough, but Bugsy could reject it to react like a madman.

So this was the crucial moment. Out of pure fury Bugsy could destroy Scott and everybody else—including himself—by acting on the idea that Scott must be lying.

But he wasn't. Not even about the possibility of survival. He should and he would be able to get the checkpoint-buoy through the thickest and most irresistible of rushing meteoric swarms, provided that it was here and now and under the current conditions. Here. Now. With all things as they were. If Bugsy would believe it. But he couldn't be told how it should be done. He wouldn't believe that!

So Scott went out of the control-room to act out a lie. The one starkly needed thing was Janet's safety for the next forty-five minutes. He couldn't demand that the search for her stop. Bugsy wouldn't honor and Scott couldn't en-

STOPOVER IN SPACE



force agreement for that. He had to make sure she wouldn't be found. That Bugsy's men would only look where she wasn't. Given forty-five minutes more, he could put the ship in a position of relative safety. It wouldn't be wise to do it earlier. Then, given panic—which should be contrivable—he might join her. And then, given unlimited good fortune, he'd have Lambda not only safe but helpless for harm. He could have Janet and himself with a not unreasonable hope of survival. And he might—he might!—have Bugsy and Chenery and their followers set up for a final, painless journey into official gas-chambers. It was Scott's duty to arrange that. But he almost regretted Chenery.

Such a sequence of events was possible. The outline of actions to produce it was complete in Scott's mind. But when he tried to envision carrying them out, pessimism appeared. He couldn't believe he'd make it. But he had to try.

He went down the stairs to the hotel level. There were only stairways throughout the ship because lifts or elevators can't be sealed off at each deck-level in case one should lose its air. Stairways can. Scott went down the first. The hotel-space was totally empty. Scott didn't believe he wasn't seen. On his first arrival he'd suspected closed-circuit viewers.

Now he didn't think there'd have been any skilled work done to permit the watching of the Golconda Ship's crew. The idea was to murder them immediately. But Scott still felt that he was watched.

Bugsy would scatter his men, fast, to see in what direction Scott moved to take Janet out of hiding. He'd have his followers search desperately ahead of Scott. If they found her, Bugsy would hold the whip hand from that moment on.

Scott reached the bottom of the grand stairway to the three cabin-levels. He heard rustlings nearby. Once he heard what seemed to be furtive, hurrying footsteps. He was definitely watched, though there weren't eyes upon him every second. But when he wasn't seen, his footfalls were heard. He went down to the baggage level. To the freight-warehouse level. On down to the engine-room. All were empty, or seemed to be, except the last.

In the engine-room there were two figures, close by the useless solar-system drive unit. One was Chenery. He plainly and desperately was trying to get the still-drunken engineer roused to sobering panic again, so that he could make the drive-unit work. If he succeeded, and if the engineer accomplished it, that would spoil Scott's intended maneuver. Chenery, of course, couldn't imagine that.

"Chenery," said Scott grimly, "I'll tell you a secret. That's hopeless. The engine can't be made to work. It's a big job."

He heard sounds of movement. He'd outstripped some of the men who'd accompanied him this far. Chenery turned harried eyes upon him.

"I disabled it," said Scott. "It can't be made to work! I need for it not to work! It's necessary if I'm to get the buoy through the comets!"

Chenery was stricken dumb, staring at him.

Then, more grimly than before, Scott said, "And I'll tell you another secret. Buggy's got men trying to find out where I'm going. I'm going after Janet. I don't want to be followed. So I'm doing something about it."

He turned. He'd come down a straight-line stairway with a right-angled turn at the top. It was not ornamental. It was strictly utilitarian. Scott deliberately threw a hand-grenade. It was one of those he'd taken from baggage on the luggage-level. It barely skimmed over the top step of the stairway. Curving down, it hit the wall beyond. It exploded. There was flame and a racking detonation, and the top of the stairway was suddenly bent and twisted. It was not a practical stairway from that moment on. There were howlings, above.

Scott went on. He left Chenery

making vague gestures to himself, as if he were trying to wring his hands but was not quite able to control them for the purpose. The engineer remained semi-comatose. He'd roused for a moment at the shock of the explosion. He gazed owlishly about. Then he went to sleep again.

There were more levels going down. Scott descended in a cold fury. Normally the tradition of the Patrol is that it has its work to do, and its members chose to join the Patrol to do that work. It deals to some extent with criminals, who chose their profession with the same freedom. Ordinarily a Patrol man doesn't hate a criminal as a man, however sternly he deals with what a criminal does. But this is where men only are involved. Had there been only men on Lambda, Scott could have dealt with Chenery and Buggy without emotion—and would probably have done a better job because of it. But there had been women passengers murdered only to prepare for another crime. Janet was hunted now for further atrocity.

He raged. But he'd learned painfully to distrust all emotion-motivated thinking. He tried again to examine his reasons for doing what he did now. He was heading for the lifeboat's stern. Janet was not hidden there. She was in a lifeboat up near the bow. But no less than twice she'd been seen in

the stern, with Scott. It should look as if some special hiding-place had been chosen for her there.

And Scott's present armed foray, on top of his savage command that everybody get out of his way—it ought to look as if he were going to get her out of that hiding-place.

The reasoning checked. It did make sense. But it didn't feel right. He had another grenade ready for demonstration purposes, though, when he heard patterings behind him. He stopped his descent instantly. The following, rushing footfalls continued.

Then a wheezing, anguished voice panted, "Lieutenant! Lieutenant!"

It was Chenery, and he sounded as if he dreaded equally that Scott wouldn't hear him, and that someone else would. He came desperately down the stairs.

Scott said, "Hold it!"

Chenery stopped short so abruptly that he almost fell forward. He clung to the stairway handrail, panting.

"Lieutenant—"

"Well?"

"You said you'd—smashed the drive-engine!"

"I disabled it," said Scott coldly. "There's only one way to get the Lambda through the next few hours. A fool using the drive could spoil that way."

"Are you—goin' to get through yourself? Honest, Lieutenant?"

Scott shrugged.

"I'm betting on it. A big bet. My life."

"Listen!" panted Chenery. "I—I don't want to die, Lieutenant! But I—I didn't mean this job to be worked this way! It was goin' to be smooth an' crisp an' smart! Nobody hurt, and the biggest job ever, pulled off like a—like a masterpiece! See?"

"I haven't much time," said Scott impatiently.

"L-look! If Bugsy gets away with the Golconda Ship, he's goin' to kill me anyhow! I know it! So I got nothing to lose. But—I've been a fool! And—I got a public. There's people that admire me! But—I'll ha' brought him her an' planned everything, an' he'll—"

"I said I haven't much time!" said Scott sharply.

"Let me—throw in with you!" pleaded Chenery. "I haven't got a chance anyhow! If the comets don't kill everybody, Bugsy'll kill me an' he'll—brag about it!—So nobody can track him, but he'll brag! About makin' me a fool! Let me throw in with you! Maybe I can help!—I know that won't keep me from the gas-chamber, but if I got to die I don't want to look like a fool!"

Scott hesitated for a moment. But it was quite possibly true. Chenery's vanity had been crushed and shredded, but he had

protected Janet and attempted futile apology for the murders he'd unintentionally brought about. More, Scott believed that Chenery wouldn't live to divide anything with Bugsy, and that he knew it. Whether or not he could be of any real use was a question, but now was no time to debate it.

"Can you get back to the control-room?" he asked.

"I—I think so"

"Go there," ordered Scott. There's an automatic meteor-watch instrument. Do you know it?"

"N-no. But I—"

Scott stopped him. He told exactly where the instrument was on the control-room wall. It was a variant of a very ancient device, a proximity-fuse, which had been devised for use in war on ancient Earth. As used now, it gave warning of the approach of objects in space. It ignored all but approaching ones. It ignored micrometeorites. Linkage with a radar-scanner cut off reports of those whose lateral change of bearing indicated that they'd pass well to one side or another. In effect, it gave warning of objects above a minimum size approaching on collision or near-collision courses.

"It's set for one hundred miles sensitivity," said Scott. "There's a pointer to change it. Set it for four hundred miles. Then watch it. If the dial shows probability above five per cent, make sure

the alarm gongs ring, even if you have to turn them on by hand. Understand?"

Chenery said agitatedly, "Yes. But I'm throwing in with you—"

"And I'm giving you orders," Scott told him. "Carry them out or don't. But for now—don't follow me! Move!"

He gestured. Chenery turned around and trudged up the steps again. It seemed to Scott that he was wringing his hands.

Scott continued his descent. His purpose here was to convince Bugsy that Janet was somewhere in these parts of the buoy. To do that, he had to keep attention focussed on himself. The way to do that was to keep in action, even though he acted only to keep attention on himself. And the best action he could take was to vanish.

He did. In the simplest possible fashion. Between the engine-room and the hospital-and-crew's-quarters deck, there was a half-level—a space with only half the usual ceiling height. When Lambda was a liner, by standard spacecraft regulations she had to carry emergency food supplies for not less than one full standard year for a maximum ship's company. Ship owners protested bitterly against this dead-head cargo. It cut down the paying freight a ship could take aboard. But the requirement was fixed. This half-deck was the space in which

those emergency rations had been carried. The practical result of carrying them, of course, was that *if* a ship were disabled in space, and *if* repairs by her crew were impossible—why—since there was no real chance of any other ship finding it, a year's supply of food meant that those aboard would have so much extra time in which to go mad from despair before they died.

Scott reached this storage-area. It was long since three-quarters empty. There were only a few big crates of now undoubtedly unusable rations remaining. The section was dark and the air stale. Scott stepped off the stairway and vanished in its obscurity. Then he simply waited.

Again he had bitter doubts. Now he had forty minutes or less before the Lambda would arrive near the guessed-at point where her destruction might be expected to begin. His guess could be wrong. There might be stray stones or steel objects. They'd become more concentrated near the comet's center. At any instant even now there could be the final event—an impact no one aboard Lambda would feel, because everyone would be dead *before* he could experience dying. But it might be delayed. . . .

All this was chance, and chance would have to decide it. But Scott had to think of other, less random things. If he should get the buoy

through the comets, it would have to be because he wasn't interfered with. He couldn't do it with panicky killers clamoring that they must be made instantly safe in a fashion they could understand. He couldn't have Bugsy's high-pitched and frantic commands that he do something instantly or be burned down. He'd need to do what had to be done with absolute precision and without disturbance. He couldn't handle the buoy and at the same time reassure blaster-men who might kill him any instant because they couldn't understand that he was saving them.

There were, then, two actions to be performed. One would keep Janet from being found. The other would keep Bugsy's crew of murderers from being able to hinder the preservation of their lives for, of course, gas-chambers.

Scott was now performing the first action by the most improbable of actions—no action at all. He sat in the emergency-supplies half-deck, breathing stale air and watching the minute-hand of his watch. He'd been followed down from the hotel-restaurant level by Bugsy's men. They had orders not to let themselves be seen, but to find out where Scott had hidden Janet. They were now wildly wrong in their guess because he'd made them so. But now they'd no idea where he was at all.

Minutes passed. Slowly. With a horrible deliberation. There was no noise for a long time. Then somebody dashed down the stairway going through and past the half-deck. Scott watched him, blaster in hand, as he ran past the darkness of the storage-space. If he'd stopped to look, he might have seen Scott as his eyes adjusted to the darkness. If he had, Scott would have needed to blast him. But he rushed by. Bugsy's orders, now, were to find Janet. To follow Scott. Everything depended on it! Now there was confusion. Scott had disappeared.

Scott gave him two minutes in which to spread dismay and to rouse Bugsy to foaming fury. They were very long minutes indeed.

Then he went on to the stairway himself. He followed the same route as the man who'd rushed down. One more level and he listened. He emerged on the very last level of all. There was babbling, somewhere.

Scott shifted his blaster to his left hand. He weighed a less-than-half-sized grenade in his right. He threw it.

It exploded. Flames and smoke and fumes spread to an incredible distance. The door of the crew's cabin disappeared. The door-frame partly crumpled and partly vanished. There was a crater in the floor. There were cries. Scott had indicated for the sec-

ond time that he did not want to be followed. And nobody would make any haste at all to disobey him. Inside the crew's quarters men were dazed and bewildered by the wholly unexpected explosion practically in their midst. Before any of them dare to look outside, Scott was gone on past the hospital—the remaining patient was there no longer—and through another door under a sign saying *Lifeboat. Do Not Enter.*

He closed and jammed it behind him. He went along the brief passage from that doorway to a metal, airtight door. It was closed and locked, of course. Lifeboats can be entered only when a certificated officer makes it possible. Only especially trained men can make such use as can be made of a space-boat.

But Scott had a key for it. He'd let Janet into another lifeboat, far up near the bow. He now used the same key—it was practically part of an officer's uniform—to enter this lifeboat blister. But he didn't enter the boat itself. He locked the blister-door behind him and turned to that closet within the blister which holds spacesuits ready but protects them from pilfering or souvenir-hunting crew members and travellers. There was only one suit here. He laid out certain of the things in his pockets. The airlock key. Grenades. His blaster

and its strap-down holster.

With strict method, he checked the space suit. Air. Batteries. Signs of wear. Space-cord. He put it on and transferred the items from his pockets to the suit.

He was in the act of putting on the helmet when a clanging, clamorous gong sounded stridently and persistently in the blister, as in every other part of Lambda where a human being could be.

He knew what it was—a meteor-alarm giving notice of some sizeable object approaching the Lambda on a collision or a near-miss course. Its sound was distinctive and jangling, and it was sounded so often on tape-drama shows, to point up a moment of suspense, that few people were ignorant of its meaning. Buggy's men would know!

Scott settled his helmet with that professional twist not even all the men of the Patrol get the knack of. He opened the small side-port that work-parties use when a ship is aground, but very, very rarely in space.

He stepped out on the outer surface of the buoy.

There were nearly no stars. The Lambda was already within the mist, the vapor, the infinitely thin shining stuff which is the visible part of a comet. Nothing but that luminous haze could be seen in the direction toward which the Lambda moved. The glittering marker-buoy, only a mile and a

half from Lambda, was utterly distinct. But perhaps fifty stars out of billions could still be seen in the direction from which the buoy had come.

It went on toward destruction as Scott stood clumsily in magnetic-soled shoes on the buoy's hull.

Chapter 7

A class in nature-study on Trent looked fascinatedly through transparent panels at carefully preserved specimens of the fauna and flora of that now long-settled world. Earth organisms brought by the early colonists had long since crowded out the native types everywhere that they were not especially guarded. On another world, the planet Tambu, the chains of volcanos that so impressed the first exploring parties were now tamed, and vast industrial complexes operated on the unlimited power they produced. The watery world of Glair had seemed to defy humanity to subdue its single, limitless, brackish sea for merely human uses. But there were colonies on its floating ice-caps now, and processing ships used electric currents to herd marine creatures into motor-driven nets, while electrolytic plants continually extracted rare-metal elements from the semi-salt seawater. And there was Fournay, and Glamis, and Krail. On Fournay, colonists pre-

pared exportable planetary specialties from the hides of the largest carnivores in the galaxy. On Glamis useful and profitable products were made from the half-animal vegetation whose various species devoured each other and tried to kill men, and even the murderously poisonous Krailian trees called *upas*—from an Earth tradition—were now confined to special forests, and from their venom men extracted a cure for indigestion.

All through the galaxy it seemed that there was defiance of mankind. And all through the galaxy men made matter-of-fact profit out of things designed to frustrate them. They didn't often destroy the inimical things they encountered. Usually they diverted them from the purposes which were their own, and turned them to use for the purposes of mankind.

But Canis Lambda seemed for a long time to have won a single, isolated victory over men.

Men began to search for planets on which to deposit their continual increase. They found and settled worlds so rapidly, though, that there was now no planet anywhere which did not clamor for more inhabitants. And still new worlds appeared. But Canis Lambda, burning fiercely in emptiness, still defied men.

Aeons since, when humans first blinked astonished eyes at the

miracle of fire, in the First System, Canis Lambda has taken measures. Then it had four planets which men might eventually desire. So Canis Lambda destroyed them; shattered them and turned them into jagged, ragged scraps and lumps of broken stone and steel. It left specimens large enough to mock the men who would some day arrive. There were a few asteroids not less than forty miles in diameter. Smaller bits couldn't be counted or even estimated. But none could be of any conceivable use to mankind. And Canis Lambda flamed sullen triumph at its victory for thousands and hundreds of thousands of years.

When men did come to it, there was nothing for them to live on or mine or make any use of at all. But they'd have liked to find a planet here. There wasn't one. So they made a robot checkpoint here to do part of what their plans required.

Canis Lambda destroyed it. Men built another. Canis Lambda destroyed that. So then men drove out an ancient space-liner which otherwise would have been made into scrap. They put it into orbit around Canis Lambda. And as if for insult, they paired it with a merely mile-big lump of metal to mark the place where it should be when they wanted to find it. And then ships could make use of Canis Lambda. It was a check-

point which could be seen and used for aiming from very far away. Ships steered for it. They broke out of overdrive and were assured of clear space to the next checkpoint on this space-lane or that by a tinny voice from the buoy saying, "*Checkpoint Lambda. Checkpoint Lambda. Report. Report.*" And then the man-made ships went on, having made use of Canis Lambda despite itself.

But now this would end. The space-buoy would be destroyed by four of the Five Comets acting together, with the fifth coming along a little later to make sure. And then men wouldn't try to use Canis Lambda again.

Scott didn't think of the situation in those terms, of course, but the universe as he saw it from the hull-plates of Lambda did not look warm or comforting or hospitable. Where he stood, he was in unshielded sunshine from the knees up. His spacesuit glittered. Over his head the marker-asteroid loomed—it seemed menacingly. Behind him, the curve of Lambda's hull showed the sunlight forming a slightly wavery terminator between the utter darkness of shadow and the intolerable glare of the sun. But after a moment the shadow was not absolute black. There was some light reflected from the marker-asteroid, like moonlight on Earth and earthlight on the moon.

In it he could see the edges of the plating. But the contrast between the lower parts of his legs, on the side from which the sunlight came, and the blazing brightness of the rest was extraordinary.

The mist which was the visible part of the comets was lighted by the sun, but it cast no shade. It was too thin. Scott could see to the farthest forward part of Lambda's hull with complete clarity. Even a mile or two miles of distance showed no change. There was no fogging of any detail of the marker-asteroid's surface. He could see the same scars he'd noted from the control-room now hours ago. They were proof that like the planet Mercury of the First System, the asteroid always turned the same face toward its sun. Its day and night were endless.

All this was normal enough. The truly daunting thing was the total extinction of all but a very few of the brightest stars, and those stars ones that Lambda left behind. The buoy was partly into the misty mass which was the head of the first of the Five Comets; part way. The mist wouldn't blur the stars in scores of miles, but in thousands it would extinguish them. It had. Yet it offered no resistance to the buoy's motion along its orbit. Scott's body penetrated it at the same orbital speed, but he felt no wind. There was none. Even though the

mist was present and visible in a very vast volume of space, it was nevertheless more nearly a vacuum than physics laboratories can produce.

He turned and plodded toward the buoy's bow. He was infinitely alone—a small, glittering homunculus on a shining golden shape, which itself was minute compared to the very minor asteroid under two miles away. And the asteroid itself was an inconsiderable speck in a planetless solar system.

His magnetic-soled shoes felt sticky. Each shoe-sole had to be separated from adhesion to the steel hull-plates by a process most painfully learned in space. There must be no jerk, or the other foot might be jolted loose, too. To walk an actually straight line was proof of great skill and much experience. The sounds of his footsteps were loud, because there was no other sound at all.—At least, not for some minutes.

Then there came a snapping noise. A micrometeorite. His shoe-soles had picked up the sound from the plating. It didn't mean much. He passed an air-lock door—a small one for personnel. Even on liners such air-locks are used with extraordinary reluctance. They are convenient in spaceports aground, but not many merchant spacemen will go to their ship's outer skin in space-suits. For painting or inspection or possible repairs, yes. But

aground. Never in space itself.

Another snapping, and almost immediately another. The second made a microscopic blue-white flame in the shadowed part of the hull. It wouldn't have punctured Scott's suit; and if he felt it, it would have been only the tiniest of tappings. He went on.

Then there was a harsher sound, equally sharp but many times louder. Something considerable, perhaps as large as a grain of sand, had hit the buoy. The metal rang. The impact-flare was visible even in the sunlight. It was brighter.

More noises, some of them mere cracklings—impalpable particles called cosmic dust—but some ominously violent. At least one was violent enough to mean a possible puncture of a hull-plate, and such encounters are to be avoided. But there'd be no loss of air from within the ship. Plastic bubbles, formed into foam and shrunk by pressure, lay behind each hull-plate. A puncture released the pressure and the foam crowded into the opening and sealed it. It would handle punctures, of course, but only those not too large in size. But there were relatively very few large objects in space.

More cracklings. More snaps. They were becoming more frequent. But this wouldn't mean that Lambda was nearing the comets' central masses. The frequen-

cy of the impacts was increasing too suddenly. It was probably a minor globular cluster of tiny meteoric objects, floating about some larger object and that in turn circling the comet-mass itself. Such a cluster might be fifty or a hundred miles across, and it might consist of tens of thousands of rushing rocky morsels, and still contain no more than ten or fifteen to the cubic mile. But near the center of the cluster they'd be more dense. And larger.

Scott plodded heavily, alone in a vast emptiness with mist to wall away the stars. To his right, a spout of flame. Twenty yards ahead, another. These were massive enough to kill a man. They were larger than pin-heads.

There were four such impacts almost simultaneously. Lambda was plainly nearing whatever the meteor-alarm had told of. It could be something no larger than a baseball, or something as big as a house. It need not be on an actual collision course. It could be headed for a near miss which could be anywhere within a radius of ten miles of Lambda.

In any case there was nothing to be done. If it hit, it hit. If it destroyed Lambda, it destroyed Lambda. The number of cracklings and louder sounds grew greater, plus one or two harsh detonations that would probably test the puncture-sealing qualities of the plastic foam. Scott

headed for an airlock door. He wore space-armor and could live where there was no air, for a certain period of time. But outside the buoy he could be killed by particles the buoy's plating would stop or seal off.

He used the key that made lifeboats available and unlocked airlock doors. He pulled out the small personnel-port. He was in the act of entering when the number of crackles and snappings increased to a roar. Even through his space-gloves he could feel the tappings and harsher impacts of sand-grain morsels. But the pulled-out metal port protected him, and downstream, as it were, he could see the sunlit plating spouting venomous spots of incandescence. It was oddly like the still surface of water in a rain. And then something went by overhead. It went much too swiftly for him to look at it, but it was the size of a hogshead.

The roaring of innumerable impacts diminished as rapidly as as it had begun. In seconds the frequency of small tappings dropped. Presently it was only one now and then and here and there. The stray cluster of racing missiles had gone by.

Scott went all the way into the airlock. He put his helmet against the inner wall. By solid conduction he heard what noises there were inside. The meteor-alarm had stopped, but he heard sounds

which could have been shoutings. He heard something which could have been an explosion. He was sure that he heard a blaster. All of which could add up to pure insanity from terror, or could have been equally insane obliviousness while wreaking destruction upon places where someone suspected Janet or Scott might be hid.

Either event could produce a highly serviceable state of things. Scott got to the outside of the hull again. Automatically, he tried to look at his watch. It wasn't possible through the sleeve and glove of his space-suit.

He tried, now, to move faster. He estimated that he was just about as far from the stern as the engine-room. He'd performed the elaborate maneuvers of which this walk in emptiness was a part, to convince Bugsy that he'd gone to Janet's hiding place, which was somewhere near the stern. The idea was to have Bugsy kept busy searching for it—and him. Bugsy was sure he was near the buoy's bottom level. It would never occur to anyone but a spaceman to put on a spacesuit and return to the control-room by the outside plating of the hull. While Bugsy was busy tearing the stern apart to find him—and Janet—he might get back to the control-room with time to spare for what needed to be done there.—And he'd need

wholly impossible good luck—

But he shook his head. He couldn't count on luck. He'd risked enough. He would have to risk more, but he wouldn't build up any hopes of generosity from fate or chance or destiny. He'd told Janet he was setting up a gamble with those unreliable entities. But at any instant something monstrous and travelling miles per second could hit the buoy head on and plough through all its decks from bow to stern, filling its interior with hell-fire as it went. Or something smaller could slash open one of Lambda's flanks. Or something less considerable still could smash in just far enough to wreck one or the other cluster of steering drive-units, after which there'd be nothing left even to attempt.

He was a small and utterly lonely figure trudging forward on Lambda's outer plating. He seemed to wade in darkness up to his thighs, while the upper part of his spacesuit glittered in the malevolent glare of Canis Lambda.

That blazing monster flung up prominences and flares. It produced spots and faculae of enormous size. It was a sun, and it would not be defied and made use of by minute creatures like men! One man in a spacesuit trudging on the gilded hull of a derelict without drives, floating to destruction in empty

space. . . . One man in a space-suit was a wholly contemptible antagonist for the Sun Canis Lambda. But that yellow star waited impatiently to see the buoy turn to flame, burst into incandescence, become mere droplets of metal and shreds of ionized gases and even ultimately a short-lived comet itself, which would dissipate to nothingness and be gone forever.

Scott reached his destination, the air-lock through which he'd first entered the space-buoy. He opened the outer door. He entered. A spouting blue-white flame leaped upward from a place he'd just vacated. It vanished. He closed the outer door behind him. He opened the inner door and entered the ship.

He heard Thallian mood-music when he opened his helmet's face-plate. It startled him. But it was only hours since he'd boarded Lambda, and it was custom for spacecraft to have some sound produced continually. One didn't notice the sound, but the total silence of space would be nerve-racking. Here where there should be passengers there was music. Elsewhere there was random noise at the very threshold of audibility. Here solidograph films ran continuously in the tiny theatre, whether anyone watched or not. Scott, though, had been hearing quite other sounds for some time now, and the music filling

the silence seemed very strange.

He went across the lobby and up the stairs to the control-room. He opened the door and Chenery started up with a gasp. He'd been staring at the meteor-watch dial with fascinated, frightened eyes. The indicator-needle quivered and swayed. It summed up the reports of all the meteor-watch antennae at their different positions outside.

But it reacted only to approaching objects. Departing ones or those not coming nearer did not affect it. The dial-needle indicated the moment-to-moment probability that an approaching meteor of sufficient size to be dangerous would pass within ten miles of the buoy. A five per cent probability was negligible. But a globular cluster could be bad! It was just proven. Chenery watched. He quivered almost in unison with the needle of the meteor-watch instrument. But the danger Scott anticipated wouldn't lie in the lower percentages of probable close passings. He knew—and the thought was a grim one—that presently the instrument would tell of plunging masses of the comet's cores rushing toward Lambda with a total impact-probability of one, when destruction would be inevitable and at hand.

He moved to the instrument-board.

Chenery said shakily, "You got

a spacesuit on. Where've you been?"

"Out for a walk," said Scott shortly. "I heard noises just now. What were they?"

"M-my men," said Chenery. He swallowed. "I—used the GC phone and told them wherever they were that I was throwin' in with you. I said not to do anything that'd make things worse for 'em.—I brought them into this," he added miserably. "They were my kind of men. They liked things smart and smooth and—no trouble. I figured if you—make out, you could make—things easier for them."

"If I make out," said Scott.

He was at the control-board. He reached out and touched a control. Delicately. He moved it an absolute minimum of distance. He seemed to wait.

"Then—after a little," Chenery said unhappily, "I—hear a racket. Some blaster-shots. Yells. Somebody screamed. I think—"

Scott had heard the same tumult by solid conduction, when he was in an airlock while a firestorm of micrometeorites went past him. He touched the control again. He waited.

"One of your men?"

"Y-yeah," said Chenery. he licked his lips. "A good fella with a pen. He did some—good jobs, workin' with me.—He had on a—uniform when you came here."

Scott again moved a control.

Absolutely nothing seemed to happen. It appeared that he was trying to begin the use of whatever the control governed with a minimum of noticeable effect. But he watched the edge of a screen, where the image of the marker-asteroid was divided, with a part appearing on the stern port quarter screen and another part on the next screen forward. It wouldn't have been possible for Chenery to know if the marker-asteroid moved. But Scott could tell.

He shifted a control he hadn't touched before. By a hairs-breadth only.

"You think he's been killed?—By Bugsy?"

"A-all four of them," said Chenery. There was surpassing bitterness in his voice. "Bugsy couldn't get at me right away. So it's be like him to—take it out on them."

"And now—"

"He'll still be mad," said Chenery, without hope. "He'll come after me. There—there's no place to go. So I—just stayed here."

"That just might be a good idea," said Scott. He took an exhaustive look at the vision-screens. They showed no stars now, only an indefinite, surfaceless lighted mist which was the coma of the first of the Five Comets they must pass through. He seemed satisfied. "But I think we should discourage him from coming here.—One thing first."

He looked sharply at Chenery.

The little man was staring at the meteor-watch instrument. The needle swayed wildly. He licked his lips. It was odd that he could be despairingly resigned to being killed by Bugsy, and yet be frightened by the waverings of an indicator-needle which could be expected to report the coming of destruction for everybody in the buoy.

Scott threw a switch on the control-room's back wall. He said curtly into a transmitter just above it, "Things are going along all right so far. But if I don't call you in twenty minutes, do what I told you. What I showed you how to do. Don't act earlier unless you must. Don't wait after twenty minutes in any case. Otherwise — your situation's taken care of. But don't try to call me."

He turned to Chenery.

"Where's your blaster?"

Chenery brought it out.

"Good shot?"

"N-no," admitted Chenery. "I—we didn't really use guns. Only for show. But we pulled off some jobs you'd hardly believe!" Then he said, "Morale effect of grenades worked better than blasters. I've got some in my luggage."

"I know," said Scott with extreme dryness. "Come on."

He led the way down to the hotel-level. He showed Chenery the way to get behind the curiously old-fashioned room-clerk's desk with its counter and—very

quaintly—drapes designed to give it distinction. It would be a very good place in which to await events.

"Bugsy thinks I'm hidden out somewhere in the stern," Scott observed, "and getting me or Janet, he thinks, will end all his problems. So he's not going to give up the hunt down there simply to come up and murder you. Or he may just send up a couple of blaster-men to do it. I doubt he's much respect for you."

Chenery swallowed.

"And if you started all this business with only four men you could count on," added Scott savagely, "and called in a man like Bugsy for the others you'd need—you invited everything that's happened!"

He listened. The plaintive, slightly monotonous Thallian mood-music was the only sound, except that something made a crackling noise out on the hull-plates. But it was hardly noticeable. He turned back to Chenery.

"Now, I've got something to attend to," he said shortly. From here, you command that stair with your blaster. When Bugsy's men come into sight, drive them back. Or kill them. They won't expect to run into an ambush. When I hear shooting, I'll come out and take part if necessary. But I'd rather Bugsy kept busy hunting me astern. I don't want

him interrupting what I've got to do. So—be practical! Try to hit something! When your friends come up the stairs to kill you—you can turn your blaster to rapid fire and wave it at them, and you'll probably do all right. But don't warn them to go back! Start shooting!"

Chenery swallowed again. Trembling, he took up his post. Scott went back to the control-room. On the way he marvelled momentarily that Chenery could have been a prominent entrepreneur of criminal activities without any urge to commit crimes in person. He evidently had the kind of brain that could mull over detailed information and then design a bank-robbery or contrive the most minute details of an elaborate theft, without ever needing to make a killing or an actual use of weapons a part of the scheme. He'd probably functioned often as a consulting expert in such matters. This might have been the first time he'd ever taken an active part in a major robbery. Perhaps he'd happened to contrive a criminal masterpiece out of an accidental leak in security information, and was tempted by ambition to undertake it himself because it would be the biggest and cleverest coup of the kind since history began. That would be like him.

But Scott went back to the control-room. He pushed his space-

helmet off, and after that he moved more freely, though it dangled behind him.

Again he checked the vision-screens. They showed the same pale radiancy all about. One showed the marker-asteroid with startlingly distinct detail, but it was the only thing that any of the screens offered to be looked at. Scott tried to look at his watch, and couldn't, and looked at the instrument board clock and did sums in his head.

Once more he moved controls, two of them. He stirred them minutely. Once there was a clicking behind him, and he reached over swiftly and prevented the meteor-alarm from sounding. The situation had changed since he'd given orders to Chenery to make sure it rang. Then he'd been on the way to convince Bugsy that Janet was where she wasn't, and that he was going where she wasn't to protect her in person from Bugsy. Now he was anxious for Bugsy to be directing a hunt for the two of them. He didn't want to disturb him by putting any new ideas in his head. Which was why he moved the controls by such tiny increments — to keep Bugsy from knowing that anything was being attempted.

Presently he had the controls on full power and feverishly watched the marker-asteroid. There'd be changes needed in the control adjustments presently,

but he had Chenery on guard against men coming up from below. He knew that Chenery might be killed, but he had to consider that plump and despairing little man as expendable like himself. Meanwhile, he had to get Lambda and the marker-asteroid pointing in exactly the same direction. Exactly! Lambda had to shift—

He looked at the control-room clock. He grimaced. Time was running very short.

He heard the roar of a blaster on the next deck-level down. He hesitated for an instant, because what he was doing was of so much greater importance than anything else could be. He was attempting to prevent the destruction of Lambda, and his success would depend on how perfectly and accurately it was done. Interruption even to use a blaster on Bugsy's followers was more irritating than exciting. He didn't want to interrupt his work to have a fire-fight with professional killers. But—he had to!

He started down the stairway to the hotel-level, a blaster in his hand. He realized distastefully that if he were recognized and word got back to Bugsy, the continuation of what had to be an extremely finicky operation might be cancelled. If Bugsy came up, raging—Nobody could do delicate work with a space-buoy while defending himself against Bugsy's stark need for an astro-

gator submissive to his every command. No, there could be no compromise with Bugsy. Besides, the Lambda was Scott's first command. *And* then there was Janet—

These things ran through his mind in what was certainly much less than a second of time. He was going to join Chenery in combat against however many blaster-men had been sent to kill Chenery because he was a nuisance.

He reached the landing where the stairway turned. From it he could see very nearly all the lobby which was so much like an old-fashioned hotel. He saw smoke. A blaster-bolt had hit the floor and the floor-covering smoked luridly where it had struck. There were two men near the top of the grand stair. They had the air of professionals undertaking a not unfamiliar task. The blaster-bolt—neither of them had fired—was not even a near miss. Chenery had let off his weapon in gasping panic. It had done nothing but make smoke. Scott saw him. The two men on the grand stairway couldn't. Chenery shook as if with the ague. He wrestled with the weapon he'd carried. He was trying to turn it on rapid-fire. He was obviously in the last stages of desperation.

The men on the stair saw a very badly placed blaster-shot, hitting the floor a good fifteen feet from either of them. It was a

strictly amateur shot, and it made only strangling smoke. One of them spoke curtly. The two of them dashed up the rest of the stairway. Scott lifted his blaster with much grimness, and then the totally improbably happened.

Chenery pulled the trigger of his weapon with the rapid-fire stud pushed in. The blaster made an intolerably harsh and discordant outcry. It seemed to pour out a lance-like white-hot flame which swept crazily across the lobby. It swerved jerkily back. More white smoke billowed up. Then there was a blinding flash. A blaster-bolt had hit a blaster in the act of swinging to bear upon Chenery. The blaster blew apart. A man screamed. Then another blaster flamed momentarily, and then the seemingly continuous streak of fire lashed through the smoke toward it.

A man fled down the grand stairway, howling. Another man crawled down it, making noises like a suffering animal.

Chenery came out of the smoke, shaking.

"They'—they' both gone," he said stupidly. He spoke to himself. He wasn't aware that Scott had come to help him.

"One won't come back," said Scott coldly, from his position on the stair near the lobby ceiling. "The other may. You'll have to stick it out a while longer, but I don't think they'll hurry. Bug-

sy's still hunting me. He won't bother with you until he gives up on that."

He went back to the control-room. The position of the marker-asteroid had visibly changed. The buoy, of course, had been turned about by the only-shock-sobered engineer, and it was not likely that he'd neutralized its turning motion exactly. Once started on the slowest and most sedate of spinnings, Lambda would keep it up forever or as long as it remained a solid object. Under present circumstances, that last possibility might not be long in coming. But after one glance Scott ceased to look at the screens. Now he absorbed himself in the readings of the meteor-watch instrument. Its needle quivered. It made a sudden wild swing, almost to unity reading. Then it swung back and quivered again. That swing mean a big object approaching the checkpoint buoy from some four hundred miles away, and its return meant that it had an independent motion which had just barely urged it out of the line to make it pass dangerously close to Lambda.

Scott swore a little. If Janet could handle a space-boat competently, now would be the time to tell her to take the boat out of its blister and go to the place and take the measures he'd instructed her in. But she wasn't experienced. Her chances would-

n't be improved by such an attempt. Not yet. But—

Chenery came in. He'd followed Scott up the steps.

"Lieutenant," he said breathlessly, yet agitated. "Did you see it? I fought those fellas! I got one of 'em! Maybe I hurt the other! Me! I fought those fellas!"

"No doubt," said Scott acidly. "Can you do it again? They'll be back eventually with some others. Not yet, but presently."

He turned from the meteor-watch instrument and back to the instrument-board. Painstakingly, he cut down the power handled by one of the controls and seemed to watch for a consequence. A glance at the clock with its sweeping second-hand.

"I think I can do it again," said Chenery, urgently. The suddenly he said, "Yeah. I can! I always thought a blaster was something you let off one shot at a time! But like you said, I pushed down that stud and it was like playin' a hose! I got 'em, that way!"

"A blaster," said Scott grimly, "holds two hundred and fifty charges. With the continuous-fire stud down, it empties itself in five seconds. Then you haven't got a blaster."

He examined all the screens in turn. The marker-asteroid looked subtly different. Chenery's eyes fell upon it, but he was absorbed in the remarkable discovery of his own prowess. He'd fought two of

Bugsy's men, professional blaster-men, and was the victor. He'd been shamed and despised by Bugsy. He was slated to die, any way things turned out. It might be at Bugsy's hands or in the destruction of Lambda due to Bugsy, or else in a gas-chamber because of the murders on the space-buoy, which he hadn't intended but Bugsy had ordained. He couldn't hope for anything. And somehow he'd developed the strange detachment that such certainty brings.

"Y'know," he said thoughtfully. "I like that! Me fighting two of Bugsy's hoods an' coming out on top! I—I like it! I could've done it before, if I'd only realized."

"Yes," said Scott. "You could have saved a few lives that way, too."

The meteor-watch instrument clicked. He'd turned off the warning gong, but his eyes flicked to the dial. The needle quivered and shook. It showed a high-probability approach of solid objects. A single large mass would have given a steady indication. This quivering of the needle meant many objects. In all likelihood another cluster of meteorites travelled together, perhaps with the larger members well separated, yet with innumerable sand-grains and pebbles rushing with them to cross the buoy's orbit. The approach was swift. Seconds after the first warning, there was a

faint cracking sound. Whatever it was, it would be larger than a pinhead, but its impact was muffled on the way in. Seconds later, two more. There was a snapping noise, probably a minute puncture. More crackings. Another snap. A possible second puncture. But there was no indication of air-pressure dropping anywhere on the buoy. Punctures, if there were any, were being sealed off by the pressure-foam inside the hull-plates. But the number of extremely minute particles increased.

Another snapping noise. It was distinct.

A buzzing, from the back-wall of the control-room. Scott's hand flashed forward. He said harshly, "Janet—What?—"

Her voice in the phone-speaker was not quite steady.

"Something—broke through the blister and—punctured a viewport of the boat. I—thought you should know. I'm saying thanks and—goodbye."

He was out of the control-room before she ceased to speak. He flung himself down the stairway. He smelled the acrid smoke of the burning Chenery's blaster had produced. He reached the alcove once used by stewards for service to the lobby. The door under the *Lifeboat. Do Not Enter* sign. The metal inner door of the blister. He unlocked and dragged at it. It took all his strength to open it.

But it opened a crack and air rushed in, and it banged wide. He heard the shrill whistling sound of escaping air. He wrenched at the space-boat's port. Janet released it. He dragged her out while the ominous whistling continued.

He slammed the inner door shut on the blister and panted in relief. It occurred to him absurdly that he'd told Janet he was setting up a gamble with fate and chance and destiny, to gain for her an extension of time in which to breathe and an outside chance of ultimate survival. Now he felt that the bet had been refused. A deep and bitter anger filled him. But this was no time for anger, at that. Air can pass fast through an opening to space. But it hadn't been three minutes since the impact of a pebble spoiled his special plan for a better chance for Janet. Now she'd have to take the same chance he did.—Nearly! But not quite. Now the air-leak from the lifeboat blister was sealed off by the inner lock door. He'd gotten to Janet in time. But he began to feel a deep indignation. It seemed to him that fate or chance or destiny was cheating.

"You're all right? he demanded.

"Quite all right," She moistened her lips. "I—I couldn't possibly have gotten that door open...."

"I'm not sure you've gained much because I could," he told her. "Things aren't going as well as I hoped."

There was the faint, trivially mournful Thallian mood-music in the lobby, as they crossed it to reach the control-room. Under that small sound there were cracklings and tappings, and now and again louder impacts. Actually, all these noises could have been created by a single shovel-full of assorted sand-grains, flung to emptiness and allowed to fall until it had acquired a velocity in tens of miles per second. If there were particles larger than very tiny pebbles, they passed the buoy by. Because again, like the first globular cluster that had raced past the checkpoint, the tapping, drumming sound diminished and ended as quickly as it had begun.

They reached the control-room. Chenery stared. Scott's dash out and now his return with Janet made him blink. But he knew nothing of where Janet had been, Scott had said she was resting and he hoped asleep. So Chenery immediately shared with her his absorbed admiration of his own use of a blaster and his victory over two of Buggy's men.

"A couple of Buggy's characters came up to kill me," he told her proudly, "and I shot 'em up. I got one and hurt the other."

She looked at Scott. He was doggedly back at the instrument-board. He looked at the screens. The marker-asteroid had moved still more. It looked nearer, now. Much nearer. She said uneasily, "Is Buggy—"

"He's still with us," said Scott. "He sent me a message. I'd been so indiscreet as to say I'd found a place where you wouldn't be disturbed. He thought he knew where it was. He wants to have me where I can't refuse to do anything he commands. I think he's getting a little skeptical about the Comets. They haven't destroyed us yet. So he began to hunt for you and sent me word to do something right away, or else. The implication was that you'd suffer for it."

"Then what—"

"I still need fifteen minutes," said Scott grimly. "They could be denied me by the Comets. But Buggy's more likely to cut them short. With just fifteen minutes more—maybe twenty—I can make the buoy relatively safe. Then I can try another trick to make you safer. But I'm beginning to doubt I'll have them."

Chenery drew a deep breath. Then he said negligently, "I'll get 'em for you."

Scott did not turn his head. Janet continued to look at Scott.

Chenery said querulously, "You don't believe it? Look! I just handled two of 'em! And

what've I got to lose? I'm in a bad fix! Bugsy's men did the killings, but I get part of the blame. Bugsy's killed my men and they were good fellas. He's goin' to kill me, unless I kill him. And if you need fifteen minutes or the Comets'll kill all of us—why not?"

Janet looked at him. He believed it was approvingly. And he'd protected her on the buoy until Scott arrived. When a man does a service to a woman, he doesn't feel that she is under obligation to him. He feels that he has obligated himself to do more.

Scott made measurements on the screen.

Chenery said proudly. "He don't think much of me, Bugsy don't. I got the two men he sent to kill me because they didn't think much of me, either. Bugsy'll never think I came huntin' him!"

Scott said shortly, "Ambush is your bet."

"Yeah," said Chenery, nodding complacently. "They run into me here. They'll never think I'll go to meet them! So I meet 'em as far down as I can, and they'll run into me before they could imagine it. And they won't believe it's me until they start dyin'!"

Scott compressed his lips.

"Your blaster—"

"Grenades," said Chenery zestfully. "You know where they are. I' used them for morale effect on jobs. They stop people chasin' you. I got a reputation

for plannin' things. I got this all planned. Even if I get killed, this way I won't look like a fool. And I got a public."

He nodded grandly. Scott was skeptical. But Chenery walked out of the control-room and down the stairs. Scott suddenly believed him. And Scott's own expression became embittered. He had to stay here in the control-room. Unless he handled certain small control-levers exactly right, making them do specific things with specific energy at the exactly proper times, there was no hope for the buoy or any of its occupants. But it was humiliation to stay here, twiddling levers, while Chenery went to what certainly should be his death.

Yet it was wholly convincing that he went out to throw away his life. Chenery was at once a fool and a very smart man in his own line. He might be terrified and despairing and wholly without hope in any ordinary meaning of the word. But he knew his situations. Men of his profession have faced it for thousands of years. They have faced hangmen and firing-squads and nowadays gas-chambers with grandiose gestures of defiance or contempt. When they knew they had come to the end of things, they used melodrama as an anaesthetic and went to their deaths splendidly, in the act of making dramatic gestures to an audience consisting only of

a magnified image of self.

A tapping somewhere on Lambda's hull. It was an isolated meteoric particle. The noise was muffled by the pressure-foam that could seal off punctures sometimes more than an inch in diameter.

Then the meteor-watch instrument clicked. Scott glanced sharply at it. The needle seemed frozen at maximum indication. It wasn't reporting a small and blindly rushing globular cluster of tiny missiles now. Not this time! Its sensitive point was four hundred miles away, farther from the sun, in the line of the center and the heaviest concentration of all manner of celestial debris. But by the action of the needle, Scott knew that it was not reacting to a relatively few, relative near meteoric masses. It was registering the main mass, from beyond the four-hundred-mile limit. Its indication was what it would be if a whole giant planet plunged headlong against a completely helpless Checkpoint Lambda.

Chapter 8

But the space-buoy had one completely trivial ability left to it. When it was a liner, it was able to travel in overdrive at a high multiple of the speed of light, which is a hundred and eighty-odd thousand miles per second. As a buoy, Lambda had retained its solar-system drive

which could, in time, build up to a speed of some hundreds of miles per second. But now, using its singular sole resource for movement, it had achieved a speed of almost seven miles per hour, and it was now necessary to check that headlong pace.

Lambda, though, showed no outward sign of life. Its cluster of communicator-antennae, the radar-bowls, and the eccentric radiation-receivers which constituted the meteor-watch system—all these looked to be without purpose. It was pure irony, apparently, that Lambda's mechanical space-call continued to go out. By microwave the buoy repeated endlessly, "*Checkpoint Lambda. Checkpoint Lambda. Report. Report.*" And it happened that at just this moment, somewhere in the Canis Lambda solar system a ship broke out of overdrive. Its control-room screens showed the enormous filmy luminosity which was the Five Comets congregated almost into one, in the act of crossing Lambda's orbit to destroy it.

Nobody noticed that detail. The log-tape whirled, and the recorded log covering weeks of journeying along a space-lane was broadcast into emptiness. In half an hour or so the broadcast should reach Lambda. It would be recorded there for such use as the Space Patrol might later determine.

If Lambda still survived.

In its control-room Scott paced back and forth. He was ashamed. Chenery had gone proudly down toward the stern of the ship with an almost exhausted blaster. He intended to pick up and use certain small grenades that had been designed to be alarming rather than lethal—though they did enough destruction when they went off. He expected to be killed. But Scott was still in the control room, watching the changing distance between asteroid and buoy. He was operating the steering-units with meticulous care. It had been their function when Lambda was a liner to move the bow to right or left or up or down, and the stern to the left or right or down or up. They'd pointed the former liner where it was supposed to go.

But now, since Lambda was a checkpoint and a freight-station and a place where passengers changed ships, the steering drive-units had another function. Now, when ships had passengers to put off or freight to take on, these drive-units made the exchanges possible. They oriented the buoy so that Lambda and the visiting ship were strictly parallel, bow to bow and stern to stern. But they might still be separated by distances from yards to quarters of a mile.

When the port-side bow steering unit pushed to the right and

the starboard-side stern unit did the same, the whole ship moved to the right. Sidewise, to be sure, and at no high speed, but under perfect control. If both bow and stern steering-units thrust to the left, the ship moved that way too. Excess momentum could be checked by reversing the steering-thrust. So ships and buoys came together, these days, by using their steering-units to move them as a crab walks.

And that was the trivial ability left to Lambda, of which Scott was making use. He was moving Lambda closer to its marker-asteroid, which was approximately a mountain of steel.

There was a small, multiple tapping on the buoy's hull. It was something meteoric. Scott made an impatient, infuriated gesture with his still space-gloved hand.

"Chenery's an idiot!" he said bitterly." He fought by accident, he won by accident, and now he's gone down to take care of all of Buggy's blaster-men—and he thinks he'll make it! By accident! And I let him! I let him! Because I have to run these infernal steering-units!"

"Couldn't you explain—"

"Explain? No! It's past the time I told Buggy we'd smash into the comets. He doesn't believe in them any more. He thought I was a liar before. He's sure I'm a liar now!"

"Explain to me?" repeated Jan-

et. "Couldn't you tell me what needs to be done? Let me do it? Can't we get into a space-boat—"

"And let Lambda go smash? There'd be no space-call to contact a passing ship. A space-boat's communicators won't carry more than a few light-minutes! We'd never be heard! We'd die in the boat!"

There were other reasons. Scott's previous plan for Janet now seemed impractical. He'd meant for her to drive her boat to the sunward side of the asteroid while he'd moor the checkpoint nearby. No matter what happened to him after that, with Lambda helpless to move any distance, Bugsy would have to keep the buoy's space-call going out, so sooner or later some other ship would approach—like the liner that had brought Scott—or possibly a Patrol ship. Or, least likely but most to be desired, even the Golconda Ship. And when that happened, Janet could intervene and ask for help via the space-boat communicator, and Bugsy and his companions would only be taken off Lambda with suitable precautions. And Janet would be truly safe.

But without Janet in a space-boat outside of Lambda, Scott faced total frustration. His plans hadn't included anything specific for his own safety. He wasn't making such plans now. But as a man and a Patrol officer and a merely

ordinary citizen, he was enraged at the idea that Bugsy and his followers might get off scot-free even if not fabulously enriched by their enterprise.

Unless he got Janet away, there'd be only Bugsy and his followers aboard when a Patrol or any other ship appeared. They'd have had time to make things tidy; to clean up and wipe out bloodstains and to make sure that no evidence against them remained. There might be moral certainty of murders done and bodies done away with. There might be the soundest of reasons to be sure what they'd intended and what they'd done. But there might be no proof that would hold in a criminal court.

"Look!" he said fiercely, "there's another lifeboat down three decks. I'll take you there and—"

"No!" said Janet no less fiercely. "You've got the buoy to get where it must go! You just said why!—Show me how to handle that! Show me how to work it, and if Bugsy comes—"

There were more tappings. Somehow the spacing of these impacts from particles in space was different from the two previous increases in impact sounds. In a normal orbit, a space-buoy like Lambda might collect many micrometeorite impacts. They were negligible. But these tappings were of sand-grain volume.

As indicating the probable presence of larger particles, they were not to be disregarded. Scott had the feeling that from now on they'd continue to increase in number, and larger and ever larger missiles would flash past or into Lambda until the really massive objects arrived.

"What I'd like," he said wily, moderating his tone and his temper at the same time, "what I'd really like would be simply to have Bugsy and his blaster-men locked up somewhere where they couldn't bother me. Then I'd begin to feel some confidence. But since I can't—"

Then he stopped short.

"Locked up," he said in a queer tone. "Yes . . . Locked. . . ."

He stared at nothing, for a moment. Then he said, "There are rations of sorts down there. Yes. Either Bugsy and his group, or you and—I think—"

But he didn't say what he thought. He went quickly to a closet in the control-room. There are always spacesuits available in control-rooms. Control-rooms are the brain-centers of space-ships. If a compartment is punctured and one part of a ship loses its air, it's a man from the control-room who puts on a space-suit and inspects the damage. If there's an emergency anywhere, it's the men of the control-room who can't waste time finding spacesuits so they can take care

of it. They have to be right at hand. Scott brought out a space-suit.

"Put this on," he commanded.

He helped her. He checked the suit. Signs of wear. Batteries. Air.

"You fasten the helmet so," he told her. He illustrated, and then stopped to look at the screen with the asteroid on it. He changed the setting of a control. He went back. "The air adjustment's automatic. You have a blaster. In emergencies it can be used to burn away debris. It can also be used for self-defense. Now, open your face-plate and listen!"

He took her to the instrument board. He showed her the controls, eight in all. Four were for the bow steering units and four for the stern. As he was explaining their use, something seemed to happen to the edge of the sunlit asteroid. There seemed a part cut out of it. The dark area increased. It was a shape. It was a shadow. It was Lambda's shadow. He stared at it, and drew a deep breath of relief. When he spoke, his voice was almost unsteady because it was so perfect an accident for his present purpose.

"We want that shadow in the center of this face of the asteroid," he told her. "Remember, we can't steer in any ordinary sense. We're moving sidewise. To turn we have to move one end or the other forward or back.

And presently we have to slow up and stop. We mustn't crash into anything! Use both bow and stern units to stop as well as drive. We should stop dead short of our target and then ease ahead—"

Somewhere in the ship there was an explosion. There was a scream. Then there were the rasping, malevolent roarings of blasters.

"I'm needed below," said Scott grimly. "Try to handle Lambda as I've showed you. The shadow will help a lot. Try to get it centered, and get as close as you can to the asteroid. And—you may not like the idea of using your blaster, but if you need to—do it. I'm going to need you alive, later."

There was another explosion, not as near as the first. Scott swung his space-helmet over his head and opened the face-plate.

"I'll see you presently," he said. "I think we may make out now! I'm going to lock them up."

He ran out of the control-room door and down the steps to the lobby. He pelted across the lobby and down the grand staircase. He heard blasters going off somewhere below. An explosion which was not a blaster. He clattered on and came to more stairs, and almost fell because these stairs were steel and his shoe-soles stuck to them.

He reached the luggage-level. He saw a dead man here, and

the scorched area and damage that a small grenade had done. Evidently Chenery had been here. The travelling-bag in which Scott had found grenades was open. Scott made profane noises and took what were left. Chenery had probably been filling his pockets when someone came up upon this deck. At a guess, Chenery'd thrown a grenade at random, and this was the consequence. There was a blaster on the floor, which was scorched as if the weapon had fired, there.

Another explosion and the sound of blasters pouring a deadly fire into something. Another explosion still. Scott raced on down no less than the three levels of the hydroponic gardens, of which one was dark in simulation of the night hours plants must have to thrive and prosper.

The blaster-fire stopped. There was silence for moments, while Scott swore at his metal shoe-soles. Then he remembered and pulled heavy slippers out of his belt-pack. When a spacesuit was needed for emergencies inside a ship, there were times when magnetic soled shoes would be a nuisance. As now. Impatiently, he worked the slippers on, and the magnetism became merely a hindrance instead of a handicap.

He heard a voice. It was shrill. It was hysterical. It was Chenery.

"Come on!" he cried between pantings. "Come on an' get

killed. Y'played me for a fool, huh? I got more brains than all of you! Y'think you're smart Bugsy? I'm smarter—"

The sound of two grenades, close together. There was an outcry after the second. Chenery yelped in triumph. It was bad tactics to locate himself by such a shrill clamor. But Chenery was not himself. More importantly, he was not an antagonist of any kind. Bugsy and his fellows had ever encountered before. It is often said that professional fighting men always prepare carefully for the war just past, rather than the next. Bugsy's blaster-men were professionals. They were prepared for the last of Bugsy's enterprises, not this. They could blow out a man's ribs from behind, or burn him down from ambush. In cases of stark necessity they could fight from behind such cover as they could find. They's do a sound professional job of it. But a blaster-man understands blasters and their uses and tactics. He is not habituated to grenades. These men didn't know how to protect themselves against explosives. In particular, they didn't know what to expect of a shrill-voiced, hysterical assailant who didn't know how to fight in a professional style, and threw explosives in a totally unpredictable manner. They were bewildered. When grenades exploded behind them, they were

frightened and slightly confused.

Scott reached the main freight-hold. There was another dead man on the floor. His blaster had detonated with the grenade that had killed him. Scott couldn't spare the time for an appropriate reaction. He heard Bugsy, farther away, screaming with rage and shouting orders so thickened by fury that no one could understand them. And then Scott came out on the stairway leading down into the engine-room, and he saw the battle.

There was smoke in this place, where blaster-bolts had scorched paint and grenades had detonated near inflammable stuff. Scott could see two men behind a set-up of machinery. They fired furiously at the edges of a massive metal mounting for the overdrive equipment for this far from small-sized buoy—when it was a liner. Chenery danced and shrilled hysterically behind the mounting. From time to time he lobbed a grenade over its top.

Scott grimly opened fire from his elevated position. The clothing of a man behind a disconnected switchboard burst into flames. He leaped convulsively and disappeared through the doorway to other stairs astern. Scott fired again, and another man's extended shoe caught fire. He fled. Another man ran. Chenery howled crazily at them and plunged in pursuit.

"Chenery!" roared Scott.
"Chenery!"

He fired at yet another man whom he could see and Chenery couldn't. It was a near miss, but Chenery plunged into this formerly concealed antagonist. They went to the floor together and Scott could not fire again. A blaster went off where they struggled.

A blaster-bolt missed Scott's ear by inches.

"Chenery!" he roared. "This way!"

The two intertwined figures seemed to collapse. One lay still. The other twitched. Then blue-white, brilliant blaster-bolts came streaking toward Scott. He fired savagely and drew back. Chenery had cut down the number of Buggy's fighting men, but there was Janet. The way to make her safe was to lock up—imprison—Bugsy and his men, since he'd joined Chenery too late for total victory. So the imprisonment or the locking-up of the men now searching for him with blaster-bolts must be his primary purpose.

He was in the level above the engine-room. There was a side door, which was in one of the inter-level stairway tubes, leading from top to bottom of the buoy. He tossed a grenade. The stair appeared as the tube was ripped open. There were bales of merchandise. He flung blaster-bolts into them. Dense smoke and then flames leaped up. One bale

was Durlanian floss. It swelled as it burned; the reek was insupportable. He hastily closed his helmet face-plate and went coldly about the process of imprisonment. He smashed the other stair-tubes with grenades. He scattered inflammables and shot blaster-bolts into them. Flames leaped up to the ceiling, but they'd exhaust the air of oxygen and go out before they could do any great damage. Afterward, with the air-tubes shut off, the air would be unbreathable to anyone not wearing a spacesuit like Scott's. And there were no more in this part of the buoy. There'd only been one in the stern lifeboat blister, and he was wearing that now.

He retreated to the next deck above, and the next and next, setting fires and jamming all airlocks, closing off all supplies of purified air and leaving behind him only compartments filled with smoke-saturated air that no man could breathe and live.

He'd just come to the bottom one of the three passenger-cabin levels when the deck shivered under his feet. There was a gigantic crashing sound. Loose objects fell.

He raced up the grand stairway. As he reached the top, there was a second monstrous crashing. Again the floor quivered underfoot. He redoubled his speed. Across the lobby. Up the last stair. He burst into the control-room.

Janet had her face in her hands, sobbing. The vision-screens showed what should have been impossible. The portside screen showed the scarred, crystalline, utterly bright metal of the asteroid only yards away. The buoy had just rebounded from the second of two slow, and ponderous, and power-filled collisions with it. Janet hadn't slowed it quite enough to prevent an impact.

Scott swiftly adjusted the steering-drives. Lambda then neither drifted away nor floated back to a third contact. He ran his eyes over the air-pressure repeaters, telling the condition of the air in every compartment of the ship. none showed diminished pressure. Some showed an increase. That was where the fires Scott had set expanded the air. They'd cool off presently. Janet sobbed again.

"What's the matter?" Scott demanded. "No leaks show up. Not yet, anyhow! We bumped, but there's apparently no damage! And Bugsy and his men are locked up if ever men were!"

She tried to say "Chenery," but a sob cut off the word.

"He's dead," said Scott. "But he had the time of his life getting killed."

"N-no!"

She pointed a shaking hand at a speaker. Scott didn't understand. The speaker was the one belonging to that closed-circuit

communicator-system by which crewmen in different parts of the buoy could communicate with the control-room. Then he guessed, and turned it on. Janet had evidently shut it off.

He heard Bugsy's voice, unspeakably malevolent: "*Don't rush me, Chenery! You'll get it! Janet said he'd be back soon. Don't be in a hurry for what's comin'!*"

Scott felt himself going pale. He heard Chenery: "*To hell with you! You won't get anything from the Lieutenant. An' I had the gas-chamber comin' anyway!*"

Scott cut it off. His hands clenched. He said unsteadily, "I thought he was dead. It's Chenery. And Bugsy's got him and I—thought I saw him killed. . . ."

Janet said in a thin, shocked voice, "Bugsy called.—He said he had Chenery. He—said you put something over on him. He said you—lied about the comets. Comets are gas. He said—he said he'll do horrible things to Chenery if you don't—do as he demands. But he—said he knows how to beat the fix you've tried to put him in. He knows how to beat it!—And if you—want to live—"

"He's bluffing," said Scott grimly. "Except about Chenery. He probably isn't bluffing about that!"

He went to the instrument-board. The vision-screens showed

half the universe as a lucent, shining mist, with one angry haloed yellow sun in the center of it. The other half of the universe was the surface of the asteroid, seen from close by. It was rent and torn and irregular. It was scarred and pitted by old bombardments from a direction opposite to this. The shadow of Lambda lay long and sharp-edged over its small steep mounts and hollow places. Lambda, though, was not in its center. It was definitely close to one edge. Scott bent close, suddenly, and watched the surface of the metal mountain flow smoothly past. Lambda was not perfectly still in relation to it. It would be remarkable if it had been. Very, very slowly the crystalline surface seemed to move. Actually it was the buoy which moved, a little way only from its scarred companion.

"He's got Chenery," said Scott with surpassing bitterness. "And his mind works as only his can. He knows he's beaten. He's imprisoned in the stern-levels. He knows, now, that you're safe. And he can't threaten me with crimes against you. And he knows he was wrong about the comets. He know that! He heard the impacts on the hull! So there's only one thing left for him. He'll demand that I fix things for him—immediately! He knows it can't be done, but to make threats and then carry them out

Janet said desperately, "But he—but you—"

"He wins," said Scott very grimly indeed. "You're safe, Janet. You stay right here, and whether it's the Golconda Ship or a Patrol vessel that gets here first, you'll explain everything to them. Buggy's in the stern. You're in the bow. There's no breathable air between them, either inside or outside Lambda. Nobody can get at you. You're safe. You may be lonely, but you'll be all right."

Janet said, trembling, "But you! What are you going to do?"

"What can I do?" he demanded sardonically. "Refuse to listen and let Buggy kill Chenery as slowly as he can? Pretend it doesn't happen because I can shut off the sound? I'm going to get Buggy! And as many of his men after him as I can! I don't expect to save Chenery, but I'll make it quick for him—and he had the gas-chamber waiting anyhow. I have to do something!"

"But there's me! And you'll get killed! I'll—I'll—"

"You'll do nothing," said Scott in a flat voice. "I'm doing this!"

He went out of the control-room. It was wiser not to talk with Buggy. It might gain time for Chenery. But it would still be wise to hurry. There were two ways by which he could reach the stern-decks, where pure air still existed. He'd been seen and shot at in a spacesuit, so Buggy

might guess he'd come through the compartments where a man without a suit would suffocate. But Bugsy wouldn't guess at the outer plating of the buoy.

So Scott went to the airlock. He pulled off the slippers that partly negated the magnetism of his shoes. He twisted his helmet tight. He went through to the golden-colored outside of the hull. There the look of things was quite unlike anything anybody would have imagined.

When he stood upright, the light around him was neither burning sunshine nor the abysmal black of night. Lambda hung, it seemed, beneath and very close to the tormented crystalline metal of the asteroid, whose sunward face formed a ceiling over the former space-craft. Sunshine smote fiercely beyond its shadow and the incredibly brilliant surfaces of metal crystals reflected as if by the facets of ten thousand monstrous jewels. The effect was of fantasy, of eerie, faerie magic. In places the glittering metal was no more than thirty feet—ten yards—from the checkpoint's plating. In other places it was fifty and a hundred feet above, like a gigantic dome lined with jewels which glittered and coruscated and were never quire the same for any two seconds. The changeability came from the fact that Lambda was not perfectly still in relation to its old

companion. It moved quite slowly and quite tranquilly, but it moved. And there were momentary flashings and instantaneous sparkles of reflected and re-reflected and multiply repeated reflections of the savage glare of Canis Lambda.

Scott stood erect, but he couldn't spare time for scenery as such. He saw the edge of the asteroid, which on one side was relatively near. There was, of course, utter silence where he stood. But he could tell that Lambda was in the very center of a meteoric avalanche. He could see streaks — never objects — which nevertheless were solid things pouring past the edges of the buoy's multi-million-ton protector. It was the asteroid which was taking the bombardment anticipated for Lambda. Once a portion of its edge crumbled and broke away. As its comet-ward surface separated, the kind of bombardment it was enduring showed. Impacts on the fragment could be seen. It went tumbling toward the sun, exploding in flaming detonations where missiles struck and turned themselves and it into incandescent vapor. It split and broke again, and its fragments flamed and spouted and went on and on out of sight.

Scott marched sturdily toward the stern. He was bitter. He'd done everything he could to make Janet safe, but he doubted mor-

bidly that he had thought of everything. He felt the tiniest of stirrings underfoot. It seemed to him that the motion of the space-buoy changed, but he could not be sure.

Then a great section of the asteroid split. It had been struck by one of the true giants of the meteor tribe. A mass of something unnameable a full hundred feet across had crashed into the asteroid's vulnerable surface. It travelled at tens of miles per second. It turned to vapor more lurid than the sun and with a shock which split off a vast triangular block an eighth of a mile on a side. Such a monstrous object could not be driven rapidly sunward by impacts — and explosions — of ton and five-ton and ten-ton missiles. Slowly it separated from the asteroid's main mass, and slowly the side of the fragment undergoing barrage-like attack appeared. The surface toward the sun was unbearably bright. But the side that should have been in shadow was incandescent.

Scott went on, his purpose being to enter the sternmost lifeboat blister and then storm into the buoy's stern-section with his blaster going and greandes exploding ruthlessly. He was filled with fury that this course was necessary. He did not expect to rescue Chenery. He did not expect to survive, himself. But he

couldn't abandon Chenery to Buggy's obsession with violence. Buggy had turned Chenery's peculiarly lunatic dream of greatness into a stained and sordid fiasco, sodden with the blood of unnecessary victims. Scott tried to hurry, because Buggy might have become too impatient to wait, and might try to intoxicate himself with violence toward Chenery, before Chenery was fortunate enough to die.

But then Scott saw the edge of the asteroid as very near. He saw the motion of the Lambda in relation to it. And then he saw disaster past enduring, ahead. He wanted to run to the spot and perform the impossible and turn aside the buoy's stern. Because Lambda was turning slowly. Its sternmost part would swing out past the broken edge. It would reach into the hurtling masses of rock and metal which could no more be seen than the flame of an atomic torch, but would have exactly the effect as one upon a giant scale.

The hull shivered a little, underfoot. If Janet, in the control-room, had discovered what was about to occur and hastily applied the maximum correction of applied steering-thrust—if that had happened, the feeling and the result would have been the same. But if Janet, in the control-room, had seen Scott about to throw away his life for what a woman con-

siders the most absurd of reasons, a point of honor. . . . If Scott were going to be killed fighting for Chenery as against Bugsy, when Chenery would be executed anyhow. . . . If Janet saw it that way, it was quite possible that she'd desperately and defiantly let what happened, happen.

The sternmost part of the space-buoy swept slowly around. Its uttermost part reached beyond the shelter of the asteroid. Nothing was visible there except the lucent mist that blotted out the stars. Nothing was there. But things passed through that space—things that had just barely failed to detonate themselves upon the asteroid's major bulk.

Slowly, deliberately, inexorably, the blunt stern-section swept out—And there was light. Invisible particles from sand-grain size on up poured past the steel edge of Lambda's partner. They struck Lambda's metal. They detonated. The result had the exact look of an atomic torch, vaporizing metal to a completely perfect line.

There was no added flare when the air in the lowest deck poured out. Anything alive in it, obviously, would be unaware of that or anything else. One fraction of a second, Bugsy could be alive and malevolent and frenzied. The minute fraction of a second later, Bugsy would be dead without having had time to experience the

change. And this was true of anyone in the second deck-level too.

And then the long, slender Checkpoing Lambda, pivoting, swept past the point where the core, the heart, the center of the first of the Five Comets rushed past. The last and sternmost three of her deck-levels had ceased to be. They'd been amputated and vaporized and carried away by such a cautery as no man had ever witnessed before. There had been no sound. No violence. No shock or impact anywhere, because when an impact passes a certain stage of ferocity, it isn't an impact any longer, but an explosion.

Scott hadn't been disturbed physically. He'd heard nothing and felt nothing. The buoy's stern had been removed. There was nothing left for him to do.

Presently he trudged forward again. He was uncomfortable about Janet's handling of the buoy. The proper place for it was, of course, as near as possible to the center of the asteroid's sunward face. There was the maximum of shelter. He'd take charge and get it there, and keep it there during the rest of this meteor-storm and the ones to follow as the Five Comets vainly bombarded Lambda's marker-buoy and shield.

But there was something else. He resolved that Janet should never know of any inadequacy

in her operation of the steering-drive units. They were tricky. She was without previous experience. He'd never tell her she should have been quicker to correct the buoy's course. And of course—though this didn't occur to him — she would never defend what she had done.

When he reached the control-room and took over the controls again, he treated the event as something which couldn't possibly have been avoided—as a consequence of the two bouncing impacts of the buoy upon the asteroid. That would be a wholly legitimate explanation. The Patrol inquiry would accept it. As a matter of fact, he didn't need to discuss it with Janet at all. He ignored it except as a narrow escape for both of them.

And Janet's defensive, defiant expression gradually disappeared. She listened humbly to his technical discussions of the sidewise astrogation of checkpoint buoys, should she be needed for it during the rest of the emergency. The total time of passage through the Five Comets would be something like four hours fifteen minutes. After that —

The checkpoint would still be in orbit, where it ought to be. It would be rather less than two miles from the glittering metal mountain that had sheltered it. And the checkpoint's space-call would continue to go out with me-

chanical tedium and regularity.

"Checkpoint Lambda. Checkpoint Lambda. Report. Report."

The Golconda Ship arrived two days later. It had spent most of the interval listening suspiciously for sounds in space. When, at last, the tape-reels in the control-room clicked repeatedly instead of reeling and whining as a log was recorded, Scott used the emergency-switch and on space-call frequency he opened communication. He reported, precisely, just what had happened and the state of things in Lambda. He and Janet were not the only living occupants of the buoy. He could, he observed, clear the air of the freight-compartments so cargo could be put aboard—by the Golconda Ship's crew. He could cut off the artificial gravity to make that operation easier. But there were only the two of them aboard. Transshipment of the Golconda Ship's cargo would have to wait for the coming of replacements for Lambda's crew. He gave the impression that he didn't particularly care whether the Golconda Ship made use of Lambda or not. He didn't. It was available, but—

So the Golconda ship presently appeared. Scott was not thrilled, either by the incredible wealth of its cargo, or by making the acquaintance of multi-multi-millionaires. He and Janet no longer discussed only technical mat-

ters. They were getting acquainted. Scott had learned much about her childhood. He'd told her a great deal about himself. Matters were progressing in a fashion which certainly wasn't novel—nearly every man and girl in the galaxy does this sooner or later—but seemed to them enormously interesting. Scott wasn't anxious for it to be interrupted.

A space-boat came aboard, its occupants armed to the teeth. They found Scott's account strictly accurate. They were inclined to approve of Scott. It seemed to them that their treasure would be quite as safe under his guardianship as in a Patrol Base. Some of them seemed to envy him. After all, a multi-millionaire doesn't lead a really normal life. He is hounded by people trying to get money out of him. Scott wasn't. The Golconda Ship's company had little or no adventure except a voyage once every four years to acquire more wealth to make their lives more unnatural still. Scott had had an adventure any one of them would have been glad to experience—if only he could be sure of living through it. They decided to land their treasure on Lambda

and proceed as was planned.

Their leader came to tell Scott of the decision. Scott was talking to Janet at the time. He'd been annoyed by the need to attend to the queries of the Golconda Ship's crew. He and Janet were finding, continually, new things they wanted to talk to each other about. Janet's expression was softer and more relaxed and very curiously wistful.

The leader of the Golconda Ship enterprise told Scott somewhat pompously of the decision they'd made. He considered that he conferred a great honor. In a way, he did. He felt that Scott would be made famous by his prowess and this expression of confidence by the richest men in the galaxy. And this was not untrue. But he wanted to go on and discuss details in detail.

Presently Scott said impatiently, while Janet waited until they could talk uninterrupted again, "That's fine! That's excellent! I'm sure we can work everything out. But I'm busy just now. I'll be very much obliged to you if, just for a little while—just for a little while you'll go to hell."

The End

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DISCUSSIONS

Dear Editor:

Since you assumed publication of *Amazing* last August the standards set for the magazine concerning story quality have risen astronomically. We have collected every issue you have published so far and wonder if you have any plans to use a series of stories about a character named Johnny Mayhem. We understand the stories appeared during the 'fifties.

Also wonder if you have any plans for Edgar Rice Burroughs, or more Hamilton, or Leinster, or . . .

Chuck Hawkins
Mike Wharton
3750 Rufus Street
Fort Worth, Texas

● We're going to look into the Johnny Mayhem stories and some of the other series based on now famous characters. Meanwhile we'll do our best to bring you more stories by the all time sf greats. As far as Burroughs is concerned—we always try and use material unique to *Amazing* and *Fantastic*, and since so much of his stuff has been made available elsewhere . . . —Editor

Dear Editor:

Enjoyed your 40th Anniversary issue very much, especially the Frank R. Paul illustrations . . . Did Mr. Paul do any illo's of E.R. Burroughs? And do you have any back issues for sale?

William H. Schreiber
2449 Parkland Terrace
San Luis Obispo, Calif.

● Paul, famous for illustrating many sf greats, to our knowledge, did illustrate Burroughs. We shall, however, whenever possible bring you "Portfolios" by famous artists in both *Amazing* and *Fantastic*. As far as back issues go—we have

them, but check our ads from time to time to see what's available . . . —Editor

Dear Editor:

I have just finished reading the 40th Anniversary issue of *Amazing* and have but one criticism of this otherwise superb issue. What connection does a tale of jobless college grads like "White Collars" have to do with sf?

. . . "On the Sand Planet" by Cordwainer Smith (Dec. '65 *Amazing*) was excellent. So was "Comet Doom" by Hamilton, and "Killer Ship" by Leinster . . .

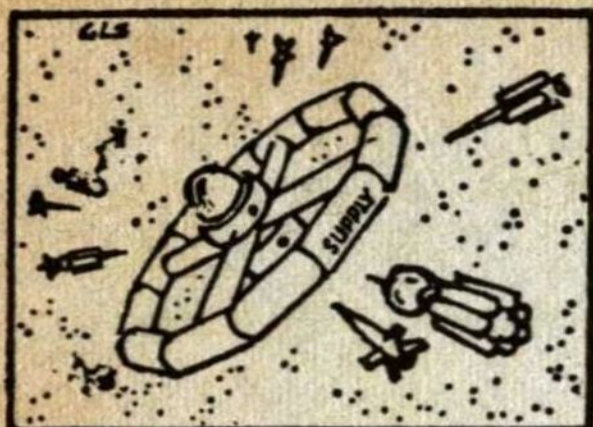
Getting back to the 40th Anniversary issue "Intelligence Undying" by Hamilton was unsurpassable. As far as I'm concerned Hamilton and Leinster are the best there are. Let's see more of these two.

I enjoy writing my own sf stories almost as much as I enjoy reading those of the masters. Is there any way I can see my own work in *Amazing*?

Steve Emmons
1405 "B" 1000 Oak Blvd.
Thousand Oaks, Calif.

● First, "White Collars" is definitely sf and in the grand tradition too! The projection of socio-technological problems based on contemporary trends, whether in the 'thirties or the 'sixties, is speculative writing at its best. Besides, if sf can't come to grips with this kind of thing, what can?

As far as getting into print—see the May '66 *Fantastic* for details about our new policy of guest editorials. Of course, you can always send in your double-spaced typewritten ms, enclosing a stamped, self-addressed return envelope. The 'script will be read, you can be sure of that, and if it's good enough, who knows? —Editor



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