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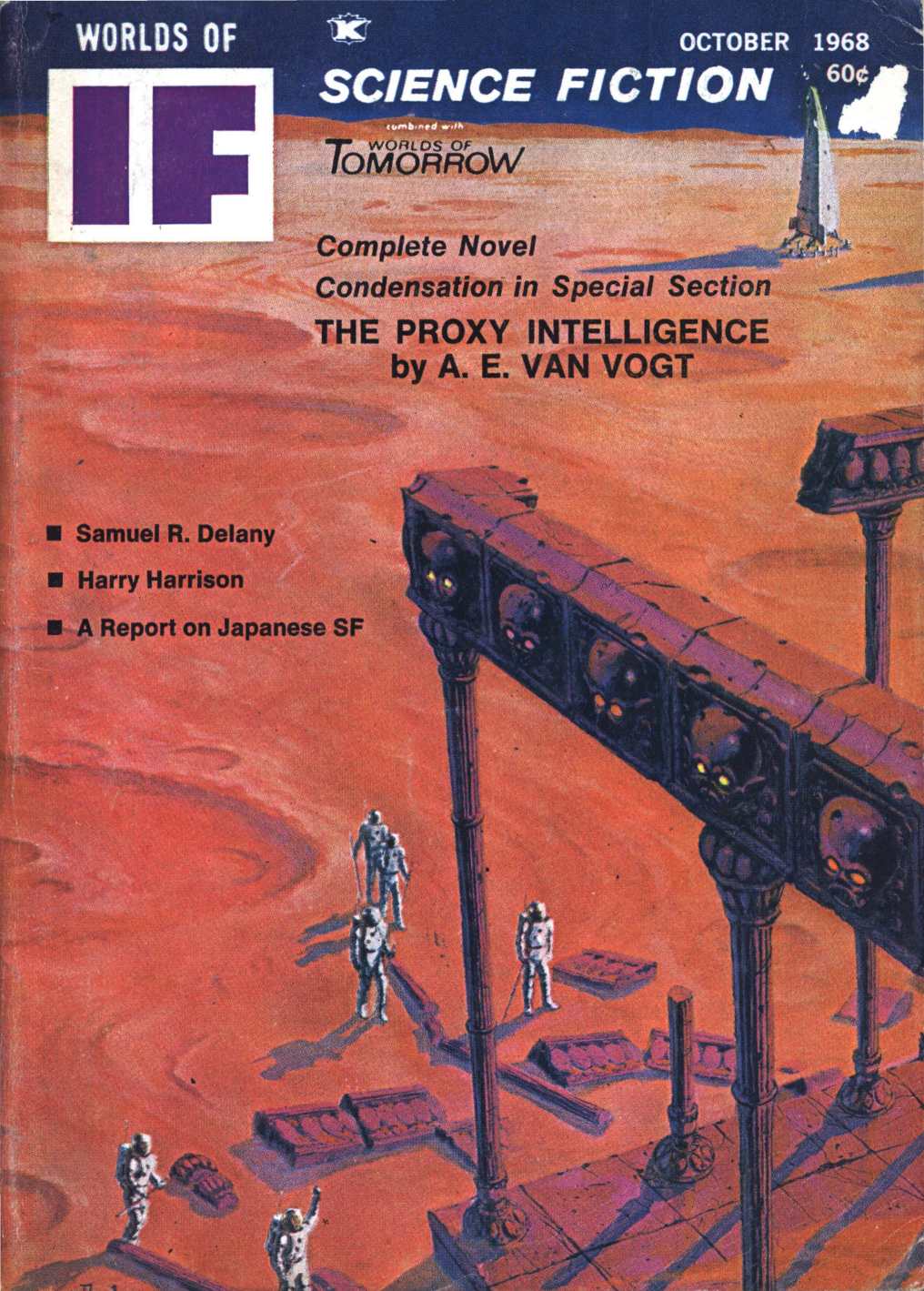


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Cover by CHAFFEE from HIGH WEIR

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PACKAGING PEOPLE

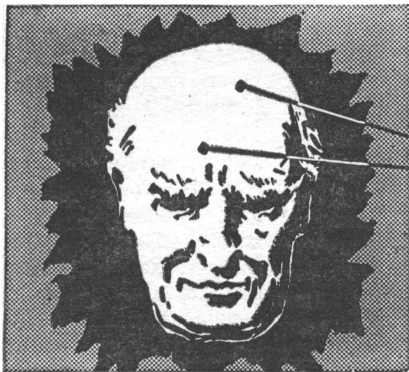
The other day we toured the city of Chicago with an NBC Television sound and camera crew, in conjunction with a symposium on Design and the City of Tomorrow. One of the places we visited was an urban renewal project in the Southside, called the Robert Taylor Homes: a dozen tall apartment buildings, all shiny and new, on the site of what had been one of the most decrepit Negro slums in the western world. The buildings are, truthfully, pretty attractive. Each apartment has a balcony, where adults can sun themselves and children can play. Lake Michigan is not very far away, and from the upper balconies one can relax in cooling breezes from the lake and enjoy what is in fact a handsome view. Since kids are accident prone, each balcony is covered with tough wire screening, and they can be safely left unattended.

And from down below the vertical rows of screened balconies look like nothing so much as cages in a zoo, and in fact the project is more familiarly called "The Monkey House." It isn't really a fair name. It isn't fair to the zoos. A proper zoological garden is designed with total care for the needs and habits of its inmates. Most slum-clearance developments — and with all respect to the Robert Taylor project, it fits right into the general classification — seem primarily intended just to get their inmates out of sight.

A month or so earlier, coinciden-

tally in Chicago, we took part in another "life in the future" symposium in which another participant was Dr. Edward T. Hall, an anthropologist at Northwestern. Hall is also an author, and two of his books are worth your attention: *The Hidden Dimension* (Doubleday, 1966) and *The Silent Language* (Fawcett, 1959). What are the "dimension" and "language" he's talking about? They are the human use of spatial relationships as a means of communication, and the reverse: the meaning that humans get from the spatial relationships that are imposed on them.

If this seems pretty far-out and intangible, you would be interested in some of Dr. Hall's "candid camera" films of unwitting subjects being put through forced spatial relationships that aren't appropriate to the situation. Queue up in a line: for a bus, at a ticket window, wherever. You automatically keep a certain distance between yourself and the man fore and aft. The difference varies with position — the end of the line is always more widely spaced than the front; but if some clod comes along who violates "your space" by moving in too close, you find yourself restless; you try to move away; you can't because then you are intruding on the space of the man in front of you; you get up tight with hostility ... and if the ticket vendor makes a mistake in change, you take the top of his head off; and he never knows



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why, and neither do you. Different nationalities have different social distances. Arabs come up close enough to smell you, for smell is a part of communication; if you use a bland deodorant and wash yourself sterile, you may find yourself "socially offending" far more than the worst case of B.O., for in effect you are refusing to communicate with them. Latin Americans converse at closer range than North Americans. In an office conference in New York, they will pull their chairs closer to your desk; if the chairs are bolted down, as Dr. Hall's pictures show, they will try to uproot them, even perch on the edge of your desk rather than remain out of what for them is talking-distance.

Too little distance is even more distracting, and hostility-arousing, than too much. A North American receptionist can't work unless she is at least ten feet from anyone sitting in the waiting room; closer, she feels she must talk to him.

Slum dwellers have three times as much heart disease as the rest of America, five times as much mental illness, four times as much high blood pressure. Why? Apparently much of it is simply crowding — too many people intruding on each others' social distance all the time.

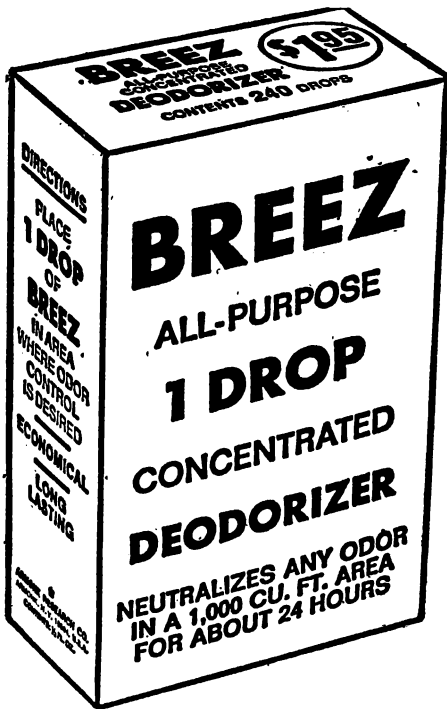
And there is another effect which is even more insidious. Walter Kleeman, Jr., of the National Society for Interior Design Environment Research Council, tells of a small-town college which took some slum youths into its dormitories. They were bright and able; the curriculum was not a

problem for them; the dormitories were. The buildings were severe modern, stripped down, functional, beautiful in an abstract sense. But they were made of such materials as plastic and exposed concrete; and, no matter what the designer's intention, as Kleeman says, "the slum-dweller's eye looks upon it and he hears a silent shout: "JAIL." They were alienated; their education suffered.

Packaging people is a far more subtle and demanding art than our society has yet come to understand. Applying the disciplines of architecture and design to it is far from enough; a proper design team needs an anthropologist, a sociologist (what would motivate a slum kid to better himself if he saw only other slum-dwellers all around him? Does "urban "renewal" make any sense at all if it only builds shiny new slums where rotting old ones are torn down?), a behavioral psychologist — even a criminologist; for proper city design can be an important part of crime control. (Simple adequate street lighting is a major help. Or witness the broad boulevards of Paris — Baron Haussman's design to help Napoleon III deploy troops against rioters more expeditiously.)

Of course, if we go on overpopulating ourselves into extinction no amount of design will keep this planet livable indefinitely. But we still have a certain amount of leeway, at least in most of the western world; if we are determined to inflict a high-density population on ourselves, it's about time we took the trouble to learn how to cope with it.

— THE EDITOR



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HIGH WEIR

by SAMUEL R. DELANY

The ancient Martian carvings had seen strange views — and their eyes still carried a message of madness!

Illustrated by GAUGHAN

I

“**W**hat do you know!” Smith, from the top of the ladder. “What is it?” Jones, at the bottom.

And Rimkin thought desperately: Boiled potatoes! My God, boiled potatoes! If I took toothpicks and stuck them in boiled potatoes, then stuck one on top of the other, made

heads, arms, legs — like little snow men — they would look like these men in spacesuits on Mars.

“Concaved!” Smith called down. “You know those religious pictures they used to have back home, in the little store windows, where the eyes followed you down the street? The faces were carved in reverse relief like this.”

“Those faces aren’t carved in re-

verse relief!" Mak, right next to Rimkin, shouted up. "I can see that from here."

"Not the whole face," Smith said. "Just the eyes. That's why they had that funny effect when we were coming across the sand."

Mak, Rimkin thought. Mak. Mak. What distinguishes that man beside the *k* in his name?

"They are handsome up there." That from Hodges. "A whole year of speculation over whether those little bits of purple stone were carved or natural — and suddenly here it all is, right on High Weir. The answer. Look at it: it means intelligence. It means culture. It means an advanced culture at least on the level of the ancient Greeks, too. Do you realize the spaces between these temple columns lead to a whole new branch of anthropology?"

"We don't know that this thing's a temple," Mak grunted.

"A whole new complex of studies!" Hodges reiterated. "We're all of us Sir Arthur Evans unearthing the great staircase at Knossos. We're Schliemanns digging up the treasures of Atreus."

I don't know where any of them are, Rimkin thought. Their voices come through the rubber-ringed grills inside my helmet. All these boiled-potato figures against the grainy rust; that one there who I think is Hodges; the sun blinds out the face plate. And, for all I know,

behind the plastic is a grotesquerie as deformed as those domed heads along the architrave above us . . .

"Hey, Rimkin, you're the linguist. Why aren't you poking around for something that looks like writing?"

"Huh . . .?" And as he said it, without hearing their laughter, he knew that inside their onion helmets they were smiling and shaking their heads. Jones said:

"Here we are on Mars, and Rimky is *still* in another world. Is there any writing or hen-scratching up there where you are, Smith?"

"Nothing up here. But look at the surface of this eye, the way it's carved out!"

"What about it?"

And then Jimmi — Rimkin could always tell Jimmi because her suit was a head and a half shorter than any of the others — climbed up the rough stone foundation blocks and with a beautiful "Martian lope" and a wake of russet dust crossed the flooring, then turned back. "Look!" He could always tell her voice, no matter the static and the distortion of the radios (long range; no fidelity.) "Here's one that fell!"

"Here!" Rimkin said. "Let me see." They mustn't think he wasn't interested.

Her soft voice said in his ear: "I can't very well move it. You'll have to come up here, Rimky."

But he was already climbing. "Yes, yes. Of course. I'm coming."

'And there was the sound of somebody trying not to snicker, identity concealed by lack of stereo.

The carving had fallen. And it had cracked on the stone flags.

He walked up to Jimmi. The top of her helmet came to the middle of his upper arm.

"It's so funny," she said with that oddness to her laughter the radio couldn't mask. "It looks just like a Martian."

"What?"

She looked up at him, small brown face behind its white frame. The movements of her laughter were displaced from the sound in his ear. "Just look." She turned back. "The great, high forehead, the big beady eyes, and hardly any chin. Wouldn't you have guessed? Martians would turn out to have looked just like a nineteen-fifties sf film."

"Maybe . . ." A third of the face had fallen away. The crack went through the left eye. What remained of the mouth leered with pruned lips. "Maybe it's all a joke. Perhaps some of the military people from Bellona came here and set this whole thing up like an elaborate stage-set. Just to play a joke on us. They *would*, you know! This is absurd, just the five of us taking the skimmer on a routine scouting trip across High Weir plateau, not sixty-five miles from the base, and coming across —"

"— across a structure as big as

the Parthenon! Hell, bigger than the Temple of Zeus!" Hodges exploded. "Come off it, Rimky! You can't just sneak off in the morning and erect an entire stone ruin. Not one like this."

"Yes, but it's so —"

"Hey! You people!" Again, the voice came down from Smith. "Somebody take a look at the eyes. Are they the same stone as the rest of the building, just very highly polished? Or are they some different material set in? I can't tell from here."

Jimmi bent awkwardly and ran her glove over the broken surface. She who is dark and slender and the definition of all grace, Rimkin thought, muffled against the blazing ruin beneath deep turquoise skies.

"It's an inset, Dr. Smith." She made a blunted gesture, and Rimkin bent to see.

The eyes were cylinders of translucent material, perhaps nine inches in diameter and a foot long. They were set flush into the face, and the front surfaces ground to shimmering concavities.

"Lots of them are different colors," Mak noted.

Rimkin himself had noticed that the great row of eyes gave off an almost day-glow quality, from across the dunes; up close, they were mottled.

"What are they made of?" Hodges asked.

"The building's that Marsite

stuff," Jones said. The light, purplish rock "marsite" had been found as soon as the military base at Bellona had grown larger than a single bubble-hut. Rimkin, there with the Inter-*nal* University group, had spent much time looking at the warn fragments, playing after-dinner games with the military men (who barely tolerated the contingent of scholars), speculating as to whether they were carved or natural. The purple shards could have been Martian third cousins to the Venus of Wellendorf, or they could have simply been eroded fragments tossed for millenia by the waterless waves.

"What are the eyes made of?" Hodges demanded. "Semi-precious stones? Is it something smelted, or synthetic? That opens up a whole world of speculation about the culture."

"I can chip some off this broken one to take back —"

"Rimkin! No!" Hodges shouted, and in a moment the bumpy air suit had scrambled over the foundation. Hodges swayed on bloated feet. "Rimkin . . . look, wake up! We've just had the first incontrovertible proof that there is — or at any rate at one time there was — intelligent life beside us in the universe. In the solar system! And you want to start chipping. Sometimes you come on like one of those brass-decked thick skulls back at the base!"

"Oh, Hodges, cut it out!" Jimmi

snapped. "Leave him alone. It's bad enough trying to put up with those thick-skulls you're talking about. If we start this sort of bickering —"

"Stop trying to protect him, Jimmi," Hodges countered. "All right, perhaps he's a brilliant linguist in a library cubicle. But he's absolute dead weight on this expedition. He spends all his time either completely uninterested in what's going on, or worse, making absurd suggestions like breaking up the most important archeological discovery in human history with a sledge hammer!"

"I wasn't going to break up —"

Then: "Oh my — God . . . No! This is —"

And Rimkin thought: Which one is it? Jesus, with all this distortion, I can't tell what direction the voices are coming from. I can place any accent on Earth, but I can't even recognize their individual voices any more! Which one?

Hodges turned around. "What is it?"

Jones, still down on the sand, called up, "What is it, Dr. Smith? What's happening up there?"

"This is just . . . no . . . this is amazing!"

They were all going to the base of the column against which the ladder was leaning. So Rimkin went too.

The white-suited figure on the top rung was peering into one of the eyes with a flashlight.

"Dr. Smith, are you all right?"

"Yes, yes. I'm fine. Please, just wait! But this . . ."

"That's a low-power laze beam he's looking in there with," someone began.

"He said be quiet," from someone else.

I can hear five people breathing in my ears, Rimkin thought. What could he be looking at? "Dr. Smith," Rimkin called.

"Shhhhh!"

Rimkin went on doggedly. "Can you describe what you're looking at."

"Yes, I . . . think so. It's — it's Mars. Only, the way it must have been. A city, the city around this building. Roads. Machines that move, and a horizon full of man-made — buildings? Perhaps they're buildings. The pictures move — and the streets are full of creatures, some sort of statue. No, they're but some different. Some hurry . . . some go slowly . . . this whole plateau, all of High Weir must have been some incredible acropolis for a mammoth, cosmopolitan community. Wait! They're unveiling some sort of statue. No, they're presenting some leader to the people. Maybe a priest. Or a sacrifice —"

After moments of silence, Mak said, "What pictures are you talking about?"

"It's like looking through a window onto what must have been here

. . . on this plateau perhaps hundreds of thousands of years ago. As soon as I shine my laze-light into the concaved surface, I'm suddenly looking out on three-dimensional moving scenes, just as real . . . just as strange . . ."

Mak turned to Hodges "Is it some sort of animated diorama?"

"It's got to be some kind of hologram. A moving hologram!" At the top of the ladder, Dr. Smith finally looked down. "You've got to come up here and see this! I just wanted to look at the inside of the eye on this carving closely. I thought with the laze-light I might detect crystalline structures, perhaps get a clue to what the eyes were made from. But I saw pictures! He started down the ladder. "You've all just got to go up there and take a look!"

Smith's indrawn breath roared in Ramkin's ear. "It's the most amazing thing I've ever seen."

"Still think somebody came by and built this today just to get us off on a wild goose chase, eh, Rimkin?" Hodges chided. "Let me go up and look. I've got my own beam, Dr. Smith." Hodges started up the rungs as Smith reached the bottom.

Frowning behind his faceplate, Rimkin took out his own flash. For a moment he fondled the tube; then he went back over the rusty sand tongues and purple stone to where the head had fallen. He looked at the whole eye. He looked at the

broken one. He did not know what perversity made him crouch before the latter. He flicked on his laze-beam.

It took twenty minutes for Mak, Hodges, Jimmi and Jones to climb the ladder, watch for two or three minutes, then climb down. They were gathering to go back to the skimmer when Jimmi saw Rimkin. She loped over to him.

She laughed when she saw what he was doing. "Now aren't we a bunch of dopes! Some of us could have looked at this one down here. Come on, we're going back now."

Rimkin switched off his beam, but still crouched before the tilted visage.

"Oh, come on, Rimky. They're starting back already."

Rimkin drew breath, then stood slowly. "All right." They started across the dressed stone flooring. The sand, fine as dust, spewed about their white boots like powdered blood.

II

The commons room of the skimmer was a traveling fragment of classical academia. The celitex walls looked depressingly like walnut panelling. Above the brass-fixed folding desk surfaces, the microfilms were stacked behind leather spines lettered in gold leaf. There was a mantelpiece above the heating

nook. The glowing plates shot pale flickerings across the fur throws. The whole construct, with its balcony library cubicles (and a bust of Richard Nielson, president of Inter-nal University, on his pedestal at the turn of the stairwell) was a half-serious joke of Dr. Edward Jones. But the university people, by and large, were terribly appreciative of the extravagant facade, after a couple of weeks in the unsympathetic straits of the military back at Bellona Base.

Mak sat on the hassock, rolling the sleeves of his wool shirt over his truckdriver forearms. He had headed the Yugoslavian expedition that had unearthed Gevgeli Man. Mak's boulder-like build (and what forehead he had was hidden by a falling thatch of Sahara-colored hair) had brought the jokes in the anthropology department to new nadirs: "This is Dr. Mak Hargus, the Gevgeli Man . . . eh, man . . ."

Mak raised the periscope of his briar from his shirt pocket "Tell me about holograms. I've seen them of course, the three-dimensional images and all. But how do they work? And how did the ancient Martians store all those pictures that just pop up under laze-light?"

Ling Wong Smith dropped his fists into the baggy pockets of his corduroy jacket. He and Mak gazed over the vines growing along the window box. Outside the tri-plex pane, across the dusty bruise of

High Weir, the dark columns — twelve whole, seven broken — sketched the incredible culture they had viewed in the polished eyes along the carved lintel.

Jimmi pushed her dark braid back from her shoulder and leaned on the banister to look.

Ling Wong Smith turned away. "It's basically a matter of information storage, Mak." He lowered himself to the arm of the easy chair, meshed his long fingers and bent forward so that his straight black hair slipped forward.

"The Martians certainly stored one hell of a lot of information in those eyes," Hodges commented, coming jerkily down the stairs on her crutches. She was large, almost as large (and soft) as Mak was large (and hard). She had a spectacular record in cultural anthropology, and combined a sort of braying energy, enthusiastic idealism, and a quite real sensitivity (she had been crippled since birth), with which she had managed to stagger through all sorts of bizarre cultures in East Africa, Anatolia and Southern Cambodia to emerge with thorough and cohesive accounts of religions, mores and manners. Her spacesuit was a prosthetic miracle that enabled her to move as easily as anyone while she wore it. But outside it, she still used aluminum crutches.

From his go game with Jones in the corner, Rimkin watched her

lurch down the stairs. She must think they're a psychological advantage, he decided.

"Go on, Ling. Now tell us all about holograms." She picked up one crutch and waved it at the Chinese psychologist, only just avoiding the venerable Nielson.

"Information storage," Smith repeated. "Basically it's a photograph, taken without a lens, but with perfectly parallel beams of light — the sort you get in lazed light. The only scattering of the light is that which comes from the irregularities around the surface of the object being recorded. The final plate looks like a blotchy configuration of grays — or mud if it's in color. But when you shine the parallel beams of a laser light on this plate, you get a three-dimensional, full color image hanging over the plate —"

"— that you can walk around," Mak finished.

"You can walk around up to a hundred and eighty degrees," Smith amended. "It's just a completely different way of storing information than the regular photographic method. And it is far more efficient."

Jones said softly, from across the gaming board, "It's your move, Rimky."

"Oh." Rimkin picked up another black oval from his pot between his first two fingers and hesitated above the grid, dotted with white and

black. Bits of information. He tried to encompass the areas of territory mapped below him, but they kept breaking up into the small corner battles. "There." He clicked his stone to the board.

Jones frowned. "Sure you don't want to take that move back?"

"No. No, I don't."

"You can, you know," Jones went on affably. "This isn't chess. The rules are that you can take a move back if you —"

"I know that," Rimkin said loudly. "Don't you think I know that? I want to go —" he looked around and saw the other watching — "there!" The click of his stone had been very loud.

"All right." Jones's stone ticked the board. "Double attari." But Rimkin was looking past Jones's small, heart-shaped Nigerian face, to the others in the room, thinking, How can I tell them apart? They all just blend with one another. The room is round, their faces are round, stuck on little around bodies. Suddenly he closed his eyes. If they started talking, I know I wouldn't be able to tell any of them apart. How is one supposed to know? How?

And if I opened my eyes?

"Your move, Rimkin," Jones said. "I've got two of your stones in attari."

Rimkin opened his eyes on the grid of black and white. "Oh," he said, and tried to strangle up a

laugh. "Yes. That was a pretty silly move after all, wasn't it?"

III

Such an absurd move; he lay in his bunk with his eyes closed and his lips open over his teeth in a leer, trying to think of a better one. He hadn't slept in two nights. An hour like this . . . maybe it was only a few minutes, but it seemed like an hour . . . and he sat up.

He swung the reading machine over his bed and rolled it to the closing of the *Tractatus*. He'd been re-reading that the afternoon the skimmer had left Bellona; *Wovon man nicht sprechen kann* He pushed the machine aside and ran his hand under his undershirt. The skimmer would not leave till the morning. They should return to Bellona that night and report their discovery to the Those Who Were in Charge of Such Things. But the university people (especially the anthropology department) treasured their brief freedom. One more examination of the site tomorrow, a few cursory readings and measurements

Rimkin walked barefoot into the hall. It must have only been a few minutes, because strips of light from reading machines underlined three doors. Which room belonged to whom? He knew, and yet somehow there seemed no way to know

Down in the locks, he put his air

suit on over his underwear. The plastic form-rings felt odd against his thighs and arms without the usual padding. He stepped into the lock.

Outside, sharp stars dropped frostsights. The sand was filled with great slopping puddles of ink. Cold, cold outside. The little meter humming in the vicinity of his chin kept the silicone circulating between the double thickness of his faceplate to avoid frosting. He stepped. And stepped. The desert sucked his boots.

The others? It was not even that he did not like them. He was infinitely confused by them. June and shadow received him. As he walked, he looked up. One bright star was . . . moving. If he stood still, he could follow the movement distinctly. Phobos? Deimos? He knew it was one of the two tiny Martian moons. But for the life of him, Rimkin could not remember whether it was Fear or Terror that coursed the frozen jewelry of this Martian night.

He saw the ruin.

He tried to blank the struggling anxieties that squirmed into the edges of his consciousness. Seven hundred and fifty-odd vitally important enzyme reactions are occurring constantly in the human body. Were any one of them to break down for even two/three minutes, the body would die. So, just to fix the free fear that ranged his mind,

he worried about one of these seven hundred and fifty-odd complex reactions suddenly coming to a halt; until he lost the subject of his worry in the coils of sand. And fear moved free above him, tangible as the slender columns, the sculpted architrave.

He looked up at the faces, obscured by darkness. The eyes caught and grayed the starlight, and regarded him. Rimkin began to paw under the flap of his pack for his flash. He found it after much too much time — he had forgotten what he was looking for twice — and rotated the dispersal grid to break up the laze beam into ordinary light.

He played the beam over the stones. They were gray, new. He wondered if the purple were actually only a reflection from the desert. No, it was just the weakness of his beam. He walked along the sand to the place where the foundation could be mounted. He started to climb, once more aware of the inside of his suit against bare skin. The heating was working adequately, but the plastic and metal textures were so odd. He wanted to take the suit off and place his hand on the stone, then grew terrified that he might; because the Martian night was almost two hundred degrees below freezing.

Rimkin stood on the edge of the foundation and fanned his light

toward the fallen head. He approached across the sandy blocks. The smaller fragment of face lay like a saucer. Its half eye had cracks all through. Rimkin squatted before the major portion of the face, leaned toward the fractured orb. He raised his flash, twisted back the dispersal-grid so that the bright, singular beam fell on the broken circle; flicker, and flicker, image and image. The fragmented orb began to weep the sights of ages.

Dawn comes quickly on worlds with this atmosphere. It climbed the dunes behind Rimkin and laid its blazing hands on his shoulders. And the mechanism of his suit began to hum and twitter about him to prepare for the three-hundred-degree rise that would occur in the next twenty minutes.

"Rimkin . . . ?"

Who was breathing in his ear?

"Rimkin, are you up there?"

The voice had been calling for some time. But with just a sound coming out of a machine by your ear, how was he supposed to know what they were?

"Rimky, there you are! What are you doing? Have you been here all morning?"

He turned around — and fell over.

"Rimkin!"

He had been in one position for almost nine hours, and every muscle, once moved, was in agony. In the pain fogging his vision like

heat he watched the boiled-potato, jogging toward him in a cloud of fiery dust.

Through his gasps he kept on trying to get out: "Who . . . who are . . . which . . . who are —"

"It's me, Evelyn."

Evelyn, he thought. Who was Evelyn? "Who . . ."

She reached him. "Evelyn Hodges, who did you think it was? Are you hurt? Has something gone wrong with your suit? Oh I *knew* I should have brought Mak out here with me. The outside temperature is about ten degrees Fahrenheit right now. But in fifteen minutes it'll be a hundred and fifty or more. I can't get you back to the ship by myself."

"No — No." Rimkin shook his head. "All right. My suit. I'm just —"

"What is it, then?"

The pain was incredible, but for a moment he was in control enough to get out: "I'm just stiff . . . I was in one position for so long. I just . . . just forgot."

"How long is a long time?" Hodges demanded.

"Almost all night, I guess." His arms weren't so bad. He pushed himself up and propped himself against the stone.

Hodges bent down, picked up the flash (a feat she could only do with her specially constructed suit) and turned it around. "You've been looking at the pretty pictures?"

Rimkin nodded. "Eh . . . yes."

She made a sound that had something of confusion, something of frustration. "You just be glad I came looking for you!" She squatted beside him, and after much maneuvering, got herself seated. "I can never sleep past five-thirty in the morning anyway, and I got to thinking that perhaps I'd let myself get carried away a couple of times with you. You know, back at the base, with all those ribbons and brass flapping around, saying all those stupid things, we've all been under a bit of pressure. Early this morning I was in the hall, saw the light from your reading machine, and thought you might be up. I peeped in, because the door was open, but you weren't in bed. I figured you must be in the library; but the doors down to the port were open and your suit was gone — well, this is the only thing around worth going out to look at. You've been here since last night?"

"Yes. I have."

"Rimky," Hodges said after a few moments, "we're all oddballs in our way. You're really not all that strange when you start looking at the rest of us. Maybe you're just a little less used to fitting your angles into other people's spaces. But I have been doing some thinking. And I got a feeling I've put my finger on the reason you were so . . . well, preoccupied all last

evening. Give a listen and tell me if I'm right."

She rocked a couple of times beside him to settle inside her blimp. "Yesterday I said something about the Martians having at least reached the level of the Greeks. But that was before we discovered the moving hologram records. That at least brings their technology — or one facet of it, at any rate — to a level comparable to the middle of the twentieth century. Or even well beyond. We still can't imbed a moving hologramic image into a crystal that just starts to playback automatically under lazed light. Now if they were all that advanced, then there should be scads of written evidence around here. If not things like books, then at least carved in the stone. But there isn't a scratch, not a dated corner stone, no mayor's name carved over the doorway. Hell, there're at least mason's marks on the blocks in the Khufu Pyramid. Now you're our semanticist, Rimky, and it must be pretty important to you that there be some evidence of a Martian semantics. But the fact that there isn't any immediately visible about a structure this imposing, coupled with the fact that they obviously stored so much *visually* . . ." Her voice hung on the word as a card player's fingers might linger on a daring discard. "Well, there's a good possibility, Rimky, that they just weren't a verbal race, and they

somehow managed to achieve this level of technology without ever employing written communication, sort of the same way the Incas and Mayas reached their cultural level and still managed totally to bypass the invention of the wheel. If that is the case, Rimky, that makes you sort of useless on this expedition. I could see that getting to you, upsetting you."

He could tell she was waiting for some great reaction of relief; that the truth had outed. How did she expect to detect it? Perhaps the change in breathing would come through the suit phones. He tried to remember who she was. But there were all seven hundred and fifty-odd enzyme reactions to think about, to make sure that one of them didn't suddenly stop

"You know," she was going on (Hodges? Yes, it *was* the Hodges woman). "I'm really the useless one on the expedition. You know what my talent is? I'm the one who can make friends with all sorts of Eskimos and jungle wildmen. And then there were the mountain cannibal in the Caucasus who wanted to make me their queen." She laughed metallically. "They certainly did. I don't care if I never see another piece of decayed yak butter again as long as I live. Rimky, I'm here just in case we run into a tribe of *live* Martians." She looked out across the barren copper. After a few more moments she said, "I

think you'd pretty well agree there's a good deal more chance you'll find Martian writing than I'll find the models for those carvings up there, wandering around in nomadic tribes, And what's more, it *does* get under my skin. I guess, being on edge like that, I've occasionally said some things, some of them to you, I'd have best held in. If you've got a skill or a discipline, you want to use it. You don't want to drag it half way across the solar system because there's a one in a thousand chance somebody might just want a minute of your time." She patted his forearm. "Am I anywhere near it?"

Rimkin thought: Live Martians? If I were a live Martian, then I wouldn't have to worry about the seven hundred and fifty enzyme reactions that keep the human body alive. But then, there'd be others, different ones, even more complicated, even more dangerous, because they have to function over a much wider temperature range. Am I a Martian? Am I one of those strange creatures I watched in the beam of my flash, walking the strange alleys with the garnet-colored walls, driving their beasts, and greeting one another with incomprehensible gestures? But this woman, which one is she? "Where's Jimmi . . .?" Rimkin asked.

He heard Hodges start to say something; then she decided not to, and began the complicated maneu-

ver of her prostheses to stand. "Can you walk, Rimkin? I think I'd better get you back to the skimmer."

"The skimmer . . .? Oh, yes. Of course. It's time to go back to the skimmer, isn't it?"

He ached. All over his body, he ached. But he managed to stand, thinking, Why does it hurt so? Perhaps it's one of the seven hundred reactions, starting to fail, and I'm going to . . .

"Let's hurry up," Hodges urged. "If you've been out here all night, you're probably on the third time through your air. I bet it's stale as an old laundry bag in there."

Rimkin started slowly across the stones. But Hodges paused. Suddenly she bent down before the broken visage and shone Rimkin's laze on the broken iris. She looked for the whole minute it took Rimkin to reach the edge. She made puzzled "mmmmmm" sounds twice.

When she joined him to climb down to the sand, she was frowning behind the white frame of her helmet. And a couple of times she made stranger faces.

IV

The process of getting Rimkin to bed pretty well finished getting everybody else up. When Dr. Jones wanted to give him a sedative, Rimkin went into a long and fairly coherent discussion about the drug's causing possible upset in his

enzymal chemistry, which the others listened to seriously until suddenly he started to cry. At last he let Jimmi give him the injection. And while the pretty Micronesian qualitative analyst stroked his forehead, he fell asleep.

Mak, in his weight allowance for equipment Vital to the Facilitation of Your Specialized Functions, had secreted a Westphalian ham and a gallen of the good Slivowitz, contending that breakfast was pointless without a hefty slice of the one and a pony of the other. But he was willing to share; the ritual of breakfast was left to his episcopacy. Anyway, he had the best luck among them beating dehydrated eggs back into shape. Now in the small area under the steps where such things were done, he was clanking and fuming like a rum-and-maple dragon.

Smith came down the stairs.

A skillet cover rang on the pan rim. Mak grunted. "I didn't realize he was that bad, Ling."

Jones folded the gaming beard; the pattern of white and black fell apart. He slid the pebbles into the pot, and pushed the stud on the pot base. "I guess none of us did." The pot began to vibrate. The white stones were substantially less dense than the black ones, so, after a good shaking, ended up on top. "Do you think Mars is just too much for him?" Dr. Jones had already noticed that the separation process

took longer on this light-weight planet than at home.

"Naw." Mak ducked from under the stairs with his platter of ham and eggs. The steam rose and mixed with the pipe smoke. "This must have been building for months, maybe all his life, if the Freudians are to be trusted."

He leaned over hefty Miss Hodges and set the platter down. Then he frowned at her. "You look oddly pensive, ma'am."

Hodges, using her aluminum stalks, pushed herself around from the table so she could see Smith, who was at the bottom of the stairs. "What happens if you cut — or break — a hologram plate in half, Ling?"

"I guess you get half the picture," Jimmi said. She was sitting on the top step. Richard Neilson was staring directly at the top of her head.

"If I sit down at the table before the rest of you," Mak said, ducking under the steps for the coffee pot, "you're only going to get half your breakfast."

Smith, Jones and Jimmi took their chairs. Mak set the steaming enameled pot (it too was from Yugoslavia, and had come with Vital Equipment) on the coffee tile, sat down and took four pieces of toast.

"Actually you don't." Ling passed the egg platter to Hodges. "If you think of it as a method of informa-

tion storage, you'll understand. You take the ordinary hologram plate, cut it half, and then shine a lazed beam on it, and you get the complete, three-dimensional image hanging there, full size. Only it's slightly out of focus, blurry, a little less distinct." He folded a sliver of ham with blackened edges and skewered it to some toast. "And if you cut it again, the image just goes a bit more out of focus. Try and imagine a photograph and a hologram of the same object side by side. Every dot of light-sensitive emulsion on each is a bit of information about the object. But the information dots on the photographic plate only relate to one point of a two-dimensional reduction. The information dots on the hologram plate relate to the entire, solid, three-dimensional object. Theoretically, even a square millimeter cut from a hologram will have something to tell you about the whole object."

"Does that 'theoretical' mean something," Mak asked, between burblings of his briar, "or is it just rhetoric?"

"Well," Ling said, "there is a point of diminishing returns. From what I've said, it would seem that holographic information storage would be vastly more efficient than photographic. But most human methods of information storage are essentially photographic; writing, tape, punchcards —"

"But those are all linear," Dr. Jones objected.

"Photographic in that there's a one to one relation between each datum and each un-integrated fact datum and each un-integrated fact —"

"Think of a photograph as composed of the lines of a television picture," Jimmi said, hastily swallowing eggs and toast. "A photograph can be reduced to line terms too."

"That's right," Ling said.

"Diminishing returns" Hodges prompted.

"Oh yes. It's simply this: if you only have a relatively small number of addresses — cybernetics term for the places your data are going to go," he explained to Jimmi's puzzled look, "then you're often better off with photographic or linear information. Because you need so many bits of hologramic information before the image starts to clear enough to be —"

"— anything but a dark, menacing shadow, a ghost, a specter of itself, a vague outline filled with the unknown and too insubstantial to contain it."

Everyone looked at Hodges, surprised.

"What *are* you talking about, Evelyn?"

"Rimkin." She gestured with her brandy glass to keep Mak from filling it beyond the brim. "Poor, crazy Rimky."

"Oh, he isn't crazy," Jones insisted. "He may be having a nervous breakdown on us, which is too bad. But he's a brilliant, brilliant man. He *did* end up beating me at *go* last night. Sometimes I'm just afraid these sort of situations are merely occupational hazards."

"True, Jonesy." She smiled ruefully and sipped. And that's all I meant by crazy."

"You brought this whole business up in the first place, about the broken holograms," Ling said. "Why, Evelyn?"

The inflamed light of the morning desert jeweled the tiny glass in her puffy fingers. "Do you remember the head that had fallen from the frieze? It was cracked so that one of the eyes had broken in half. When I found him this morning, he'd been out all night with his laze beam looking at the images in the broken eye." She put her glass on the table.

After a while, Dr. Smith asked, "Did you take a look?"

Evelyn Hodges nodded.

"Well?" Mak asked.

"Just what you said, Ling. The images were whole. But they were slightly blurred, out of focus. I think there was something off with the timing too. That's all."

Mak leaned forward, made disgusted sound, and began to batter his ashes over the detritus of crusts and butter on his plate. "Let's go out and finish up those measure-

ments." The periscope dropped hastily into his pocket. "If he was up all night, with that shot in him he'll sleep till this evening."

V

He didn't. He woke fighting the drug after they had been gone twenty minutes.

And he still didn't know where he was. Not where he should be, certainly. Because his head hurt; it felt as though the side had been broken away. His whole body was sore. He lurched from the bed and tried to focus on the objects, — pillow, reading machine, boxes of microfilm on the table — but they all had vague haloes like the superimposition from special-effect sequences in old color films.

Jimmi was sitting on the bottom step, reading. She had chosen (a little unwillingly) to stay with the patient.

Crash!

She looked up.

Richard Nielson was trundling down the steps toward her. And at the top, stood naked Rimkin. Jimmi leapt away as the bust struck the reader she had dropped on the steps.

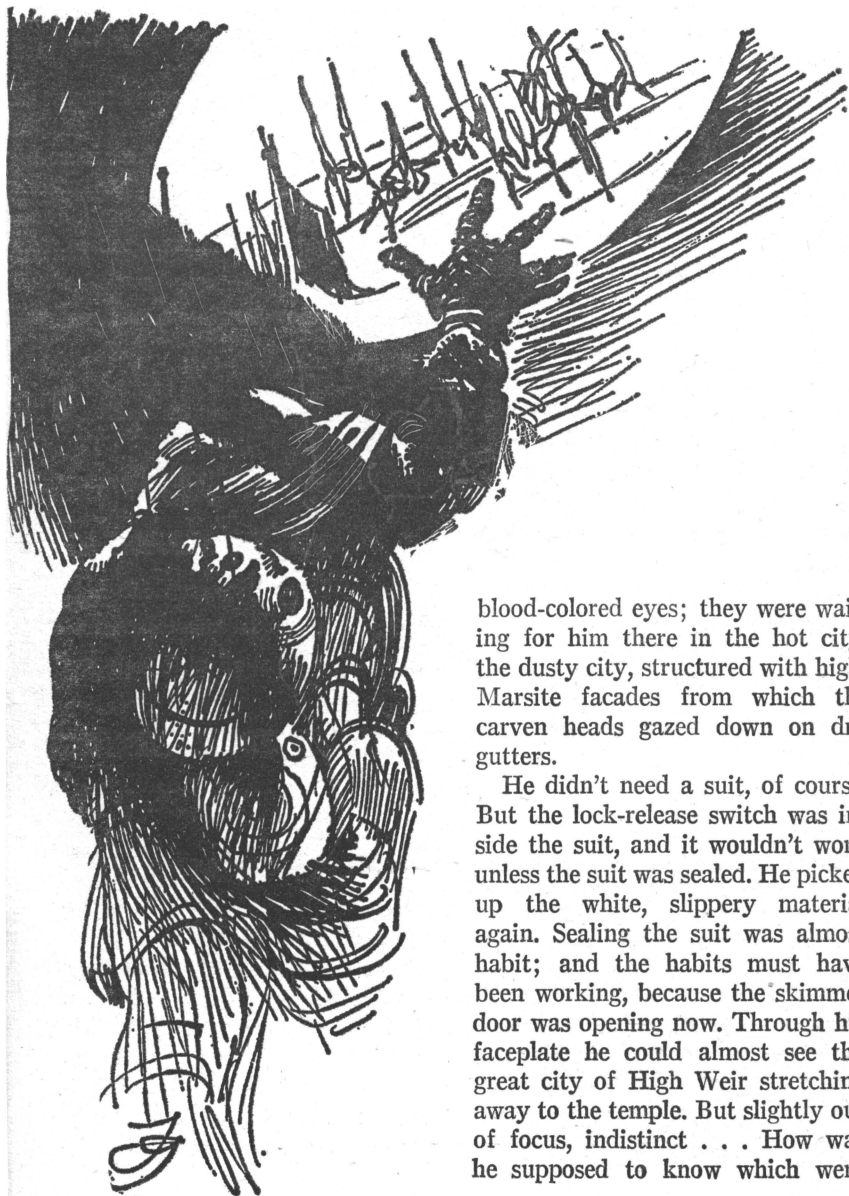
"Rimky, are you . . .?"

He came down the steps, three of them slowly, seven of them fast, the last two slowly. Then, while she was debating whether to try



and restrain him physically, he was gone through the double doors to the lockers. She ran toward them — the two brass handles swung up and clicked. She crashed against them. But behind the veneer that looked like walnut paneling was ribbed steel.

Inside the locker Rimkin fumbled the catches of his air suit and thought. Hot. Hot outside. Twice he dropped the contraption on the grilled floor. Boiled . . . boiled *something*. An earthman would boil out there on the desert without a suit. But why was he worrying? He wasn't sure who or what he might be. But the streets with their shaggy pennants, and their elegant citizens walking their shambling beasts with



blood-colored eyes; they were waiting for him there in the hot city, the dusty city, structured with high, Marsite facades from which the carven heads gazed down on dry gutters.

He didn't need a suit, of course. But the lock-release switch was inside the suit, and it wouldn't work unless the suit was sealed. He picked up the white, slippery material again. Sealing the suit was almost habit; and the habits must have been working, because the skimmer door was opening now. Through his faceplate he could almost see the great city of High Weir stretching away to the temple. But slightly out of focus, indistinct . . . How was he supposed to know which were

shapes of time-cast dust and which were the intelligent creations of the amazing culture of his people, his planet? He brushed his arm around his face plate — but that didn't do any good.

He walked down the blazing, alien street.

And the street sucked his boots.

He was going to take off his air suit soon. Yes. Because there was no need for it in such a brilliant city. But wait just a few minutes, because things were still too unfocused, too amorphous. And sand, from when he'd brushed his arm across his face plate, kept trickling down his vision. Nor were the figures in front of him Martians. He didn't think they were Martians. They were white and bulbous and were busy about the shards of purple stone, doing things to the slim columns that rose to prick the Martian noon.

"Who are you?" he said.

Two of them turned around.

"Rimkin . . .!"

"I don't know who you are," he told them.

"Hey, what's he doing out here?"

"I'm a Martian," Rimkin told them. "You're nothing but . . . that's right, boiled potatoes!" He tried to laugh, but it came out crying because his head hurt very badly, and he was dopey from what ever they had given him that morning.

"We've got to get him back to the skimmer. Come on, Rimky."

"I'm going to take off my air suit," he said. "Because I'm a Martian and you —"

But then they were all around him. And they kept holding his hands down, which was easy because he was weak from the drug. And the carved heads, the gleaming eyes, melted behind his tears.

"Rimkin! Rimkin! Are you out there? Evelyn, Mak, Rimkin's out there some place!"

"We've got him, Jimmi! It's all right. We're bringing back to the skimmer."

"Who are you? I can't tell who you are?"

"Oh, Rimky, are you all right?"

"I'm a Martian. I can take off my spacesuit —"

"No, you don't, fellow. Keep your hands down."

"I think you're all crazy, you know? I'm a Martian, but you're all talking to somebody who isn't even here!"

"Rimkin, go on back with them and don't give them any trouble. For me, for Jimmi. They just want to help."

"I don't even know you. Why do I have to come back? This is my city. These are my buildings, my house. It's just not clear, any more. And it hurts."

"Keep your hands down. Come on —"

"Jimmi, are you all right? How did he get out? He didn't hurt you, did he?"

"I guess the sedative wasn't strong enough. He surprised me, and managed to lock me in the study. I just found Evelyn's emergency keys in her room a minute ago so I could get down to the controls and radio you. What are we going to do with him?"

"I'm going to go to Mars. I can take off my spacesuit. I'm a Martian. I'm a Martian —"

"**H**e doesn't seem to be dangerous. They'll get him back to Earth, fill him full of calming drugs, and in six months he'll probably be good as new. I wouldn't be surprised to find out he goes into this sort of thing periodically. I spent a couple of weeks in a hospital drying out once."

"Why can't I take off my suit? I'm a Mart —"

"Rimky, remember all those enzyme reactions you were going on at us about this morning when you didn't want to take your shot? You open your suit, and the temperature out here will work so much havoc with them you won't have time to blink. You'll also fry."

"But which ones? How can I tell which ones will . . ."

"Evelyn, I can't hit him over the head I'll crack his helmet."

"I know, I know, Mak. We'll get him back. Oh, this is so terrible! What causes something like this to happen to a perfectly fine — more than fine mind, Ling?"

"Don't hit me over the head. Don't . . . I'm a Martian. And it hurts."

"We won't hurt you, Rimky"

"Evelyn, we're out here exploring the ruins of new civilizations on other planets and we still don't know. We know much of it's chemical, and we can do something about a lot of it, but we still don't Holograms, Evelyn . . ."

"What, Ling?"

"Nobody's ever been able to figure out how the brain stores information. We know the mind remembers everything it sees, hears, feels, smells, as well as all sorts of cross-referencing. People have just always assumed that it must be basically a photographic process, all the separate bits of data stored on the juncture of each individual synapse. But suppose, Evelyn, the brain stores hologramically. Then madness would be some emotional or chemical situation that blocked off access to large parts of the cerebral hologram."

"Then large parts of the world would just lose their sharpness, their focus . . ."

"Like Rimkin, here."

"Keep your hands away from your suit catch!"

"Come on, Rimkin. Once we get you home, you'll be all right."

"It won't hurt any more?"

"That's right. Try to relax."

As they reached the rock, Rimkin turned to one of the white, in-

flated figures and his voice grew tearful. "Aren't I . . . aren't I really a Martian?"

Two white hands patted the shoulders of his airsuit. "You're George Arthur Rimkin, Associate Professor of Semantics at Inter-Nal University, a very brilliant man who has been under a lot of pressure recently."

Rimkin looked out over beautiful rifts and dells, shapes that could have been sand dunes, that could have been the amazing structures of the great Martian city of High Weir, that could have been He was crying again. "It hurts so much," he said quietly, "how am I supposed to tell?"

END

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Report On Japanese Science Fiction

by TAKUMI SHIBANO

*Japanese science fiction and its
fandom, told by Our Man in Tokyo*

Needless to say, Japan was at one time among the least advanced countries in the field of science fiction. This was not because the Japanese people could not understand the modern attitude — the sense of scientific rationalization for the fantastically chaotic universe. In the pre-*Amazing* era, which was the period of rapid advancement of civilization in Japan, we had several active adventure writers, such as Shunro Oshikawa, who was supposed to be a Japanese version of Jules Verne. And in the period between the two World Wars

there appeared several writers of straight fantasy and pure scientific-fiction stories. The most popular and capable among them was Juza Unno, who introduced the attitudes of the newly developing s-f stories of Hugo Gernsback and others for the first time in the 1930's. He appealed mainly to young readers and was not at all esteemed in the field of general literature.

After the second World War, a flood of s-f paperbacks, discarded by GI's in the allied forces, filled the shelves of the second-hand book shops in the big cities. This stimu-

lated some ambitious publishers to attempt a series of translations of this new type of literature. Most of these trials failed because of limited sales. Anthologies from *Amazing Stories* by Seibundo-Shinkosha Company folded after seven books, and the Gengensha S-F Series went bankrupt after twenty books. These were the main efforts during this period.

However, the interest of readers was developing gradually, and for the first time in 1957 the Hayakawa Fantasy Series — published by Hayakawa-Shobo Company — made sufficient of a success to be able to continue publication. Starting in December of '57 and changing its title to Hayakawa SF Series as the sales increased, they had issued about 170 titles by the early part of 1968. Most books in this series are translations of U.S. and British stories, but a few German and Russian stories are included, as well as some twenty Japanese original novels and collections.

A little earlier than this successful effort in prodom, the history of our fandom began with the start of a club of s-f fans and writers. Its fanzine, *Uchujin* (meaning cosmic dust) first appeared in May, 1957. Publication was continued at monthly intervals, reaching its 120th issue this February. This is famous as the largest and most authoritative fanzine — or perhaps a semi-prozine, with its circulation of 500 —

and has made Takumi Shibano (b. 1926), its establisher-editor-publisher, a major name in Japanese fandom. More than half of the writers who are now supporting the Japanese s-f field have grown up in this Uchujin-Club or have at least had something to do with it.

At the beginning of 1960, *SF Magazine*, the first and only successful prozine in Japan, was brought out by the publisher of the Hayakawa SF Series. It started as a version of *F&SF*, but the contract was soon dissolved, and it began to publish Japanese stories, too. At first they tried to have some of the regular writers of other fields write s-f stories, but they later changed their policy and began to seek capable writers from fandom; and progress from *Uchujin* to *SF Magazine* has become the most orthodox route for developing writers. Masami Fukushima (b. 1929), the editor of *SF Magazine*, is regarded as a leading character in Japanese s-f prodom, having brought out both the Hayakawa SF Series and *SF Magazine* and having done meritorious work in raising the serious consideration given science fiction in journalism and the literary field. He has translated some U.S. and British masterpieces and has written many juvenile s-f stories also.

Following *Uchujin*, several fan groups began to appear in 1960. Null-Club published *Null* for 11

issues in Osaka before it folded in 1964. SFM-Fan Club — with its fanzine *Uchu-Kiryu* (meaning space current) — started in Tokyo in 1962; this is now supposed to be the largest fan group in Japan with more than 100 members, except for the subscription group of *Uchujin*. Most of the Japanese fanzines are clubzines, each supported by its subscription group.

The Japanese annual s-f conventions began in 1962. The first of these (the Meg-Con) was a one-day meeting in Tokyo, sponsored by Uchujin Club, and it was there that SFM-Fan Club announced its start. The second convention (Tokon) was held in 1963 and was the first with a two-day program, including a movie-show, art-exhibition, lodging-together and banquet, which made a pattern for later cons. The third (Daicon) was held in Osaka, promoted by Null Club and its chairman, Yasutaka Tsutsui (b. 1934). The fourth (Tokon-2) was the largest Japanese s-f convention with some 350 attending and was sponsored by the cooperation of *Uchujin*, *Uchu-Kiryu* and the SF-Art Club, which was established in 1963 by art fans. The fifth (Meicon) was held in Nagoya, sponsored by the Mutants Club, which was established in 1963 by Den Yoshimitsu (b. 1933) as a local group. The sixth (Tokon-3) was held in 1967 as a serious symposium, changing the preceding pat-

tern a little, with some 180 attending. We were planning to have a Pan-Pacificon in 1968 in cooperation with LASFS, having a branch meeting of the Worldcon of the year in Tokyo, but the L.A. fans and we lost the nomination of the con-site at the Nycon-3 last autumn.

The number of fanzines and fan-groups in Japan increased rapidly in 1965 and 1966, reaching 50 or more, though over half of them were groups of juveniles. We established the Federation of S-F Fan Groups of Japan in 1965, which now consists of fourteen major fan groups.

Hayakawa-Shobō's monopoly of the Japanese s-f field is continuing, and their *SF-Magazine* is still the only prozine we have. In 1964 they started a new series of Japanese original novels and have published twelve by now. But a few competitors have appeared in the field of translated works. Tokyo-Sogensha Company established an s-f section of their Sogen Mystery Series in 1964, which has now reached 60 titles. They are said to have made very profitable sales since they began publishing semi-classics such as the Burroughs and E. E. Smith stories. But recently some other publishers have begun imitating their practice.

Now following are the famous characters in Japanese science fic-

tion, or the names most frequently mentioned in our fandom:

Sakyo Komatsu (b. 1931) is a very active and skillful story-teller with wide interests; he has been called a bulldozer in the Japanese s-f field. He is also an opinion-shaper of Japanese futurology. He has written nearly twenty books and is supposed to be a Japanese version of R. A. Heinlein, though he stresses mainly the social sciences. Shin'ichi Hoshi (b. 1926) has been writing short-short stories mainly, with an elegant sense of fable criticism, and his published more than ten collections of his works. He was one of my closest associates when I published *Uchujin* originally; he soon became a professional writer. He helped to popularize the name "SF" in the early days of Japanese science fiction.

Kimifusa Abe (b. 1925) and the above two are a trio who have achieved popularity beyond the limits of science fiction. Abe wrote a few s-f stories, but is essentially a writer of mainstream literature, writing critical-fantasies and dramas based on his social beliefs.

Yasutaka Tsutsui started as a pro writer after folding his fanzine, *Null*, and is now following the above three with his unique satirical and comic situation fantasies, though some rigorous fans would not consider his stories to be science fiction. Ryu Mitsuse (b. 1928) is, on the contrary,

writing stories with hard-science form and poetic insight that make it seem that he intends to be a scientific Homer discussing future history. Taku Mayumura (b. 1934) writes of the society of the comparatively near future for the most part, and he is regarded as the most serious writer in Japanese science fiction.

Masao Segawa (b. 1931) is writing stories and articles for juveniles and is noted for the excellent scientific research in his work. Tetsu Yano (b. 1923) has been famous as the first S-F Fan in Japan since the dawn of our fandom and is now a professional translator and also a writer of juvenile s-f stories. These two, with Masami Fukushima, are representative names in Japanese juvenile science fiction.

In the field of s-f comics for juveniles, Osamu Tezuka (b. 1926) is the top name. He is not a specialist in sf, but his feeling is rather more stfish than any other s-f writers in Japan. He is considered a sort of Walt Disney, having produced the first animated film series for TV in Japan — *Astroboy*. Many other young comic artists as Shotaro Ishimori (b. 1938) are following Tezuka, and it is certain that the level of s-f comics is rather higher and steadier than that of juvenile s-f stories in Japan.

Aritsune Toyoda (b. 1938)

writes clever stories and is doing more — and perhaps rather better — work in juvenile fiction and scenarios for comics. His leading competitor is Kazumasa Hirai (b. 1938) whose stories are esthetic rather than technical. Alan Kiodomari (b. 1912) was a fantasy writer in the general literary field and has worked his way over to science fiction. He is a good storyteller, but most of his living is made from juvenile stories. (This applies more or less to most s-f writers; juvenile magazines publish a far larger quantity of science fiction than the adult market.)

Fujio Ishiwara (b. 1933) is not a full-time writer, but is a leader in the skillful execution of recent theories of science and technology. He maintains a high level of activity in fandom, too. Koichiro Noda (b. 1933) and Norio Itoh (b. 1942) are respected as excellent fans and have translated and introduced foreign stories. Each writes a column for *SF-Magazine*. Noda is expert on semi-classics and Itoh on more recent fiction. Once classed with the above two, Yu Mori (b. 1937) is now in prodom as the assistant editor of *SF Magazine*. Ichiro Kano (b. 1928) and Tadashi Hirose (b. 1924) are two professional

writers who often do science fiction but are also good fans and help us especially on the annual conventions.

Among many professional translators. Noriyoshi Saito (b. 1935) and Hisashi Asakura (b. 1930) are noted as specialists in sf. Saito once translated Hoshi's story into English for *F&SF*.

Takashi Ishikawa (b. 1930) is a critic of mystery and s-f stories — the only person writing criticism of sf professionally.

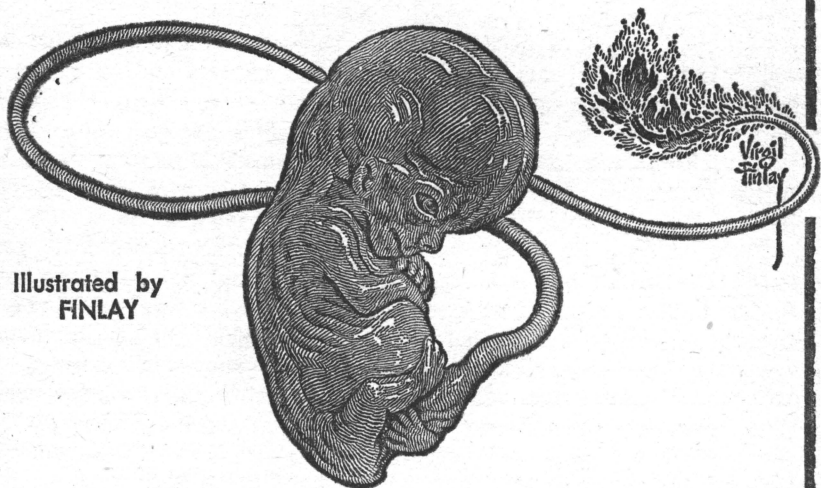
There are still many more talented individuals here, both in prodom and fandom. Some are pro writers who sometimes write good s-f stories, and others are now writing only for the fanzines. I suppose a considerable number of names mentioned above will have to be replaced with others in a few years, when our juvenile or student fans — now doing their work for the fanzines with rather poor printing — grow up into their fuller accomplishment. They are being brought up in an active s-f field, contrary to us adult fans (which includes most of the pro writers) who had to create or import the modern type of science fiction for ourselves in order to enjoy it.

END

REMEMBER: New subscriptions and changes of address require 5 weeks to process!

DEATHCHILD

by STERLING LANIER



Illustrated by
FINLAY

*This was the ultimate Quarantine.
Upon its total security depended
the life — or death — of humanity!*

I

His name was Joseph. He was a blue-eyed blond and just a little bald in front, although a fuzz over his round forehead gave a promise of new hair still to come. He was healthy, weighed twenty-two pounds and was barely eight months old. He wore diapers and rubber pants, nothing else.

At the moment, he had a very intent expression on his small, fat face. Somehow, the brightly colored plastic beads on a wood-bordered wire frame were not doing what he wanted. They simply would not come off the frame to be thoroughly tested by his four teeth for true intrinsic playability and actual baby value. It was very unsatisfactory. He whimpered slightly and then sat up straighter, his

creased, plump legs assuming what looked like a Yoga position as they curled in front of him. A little sigh, almost inaudible, but weary, escaped him. It did not sound like a baby noise at all, but rather like the wistful regret of an aged man, brooding over the many mistakes of a long life. Babies make strange noises at times.

Joseph abandoned the beads to survey his domain out of round, cobalt eyes, thumb in mouth. The room was circular, dome-shaped and about twenty feet across. Soft white padding, spotlessly clean, covered the floor on which Joseph sat and ran up the gradually curving walls to a height of four feet. Above the edge of the padded covering, smooth dark metal, non-reflecting, rose to the top of the igloo-shaped room. Light, soft and lambent, flooded in from a round opening in the center of the dome, thirty feet over the middle of the room. Square black openings were spaced at regular intervals on the walls at a height of six feet. They gave back the blankest of mirrors where the light hit them, and the baby paid no attention to them. He now had located and seized a large, floppy, green dog among the simple playthings which lay about him on the floor. Staring absently off into some far distance, he held the cloth dog firmly in his chubby hands and began to gnaw reflectively on one of its tattered ears. Inside his small body, chemical warnings were starting to send an alert throughout his system. Dinner time was approaching.

Even as Joseph chewed on the dog's ear, his whole attitude was beginning to change. He was now

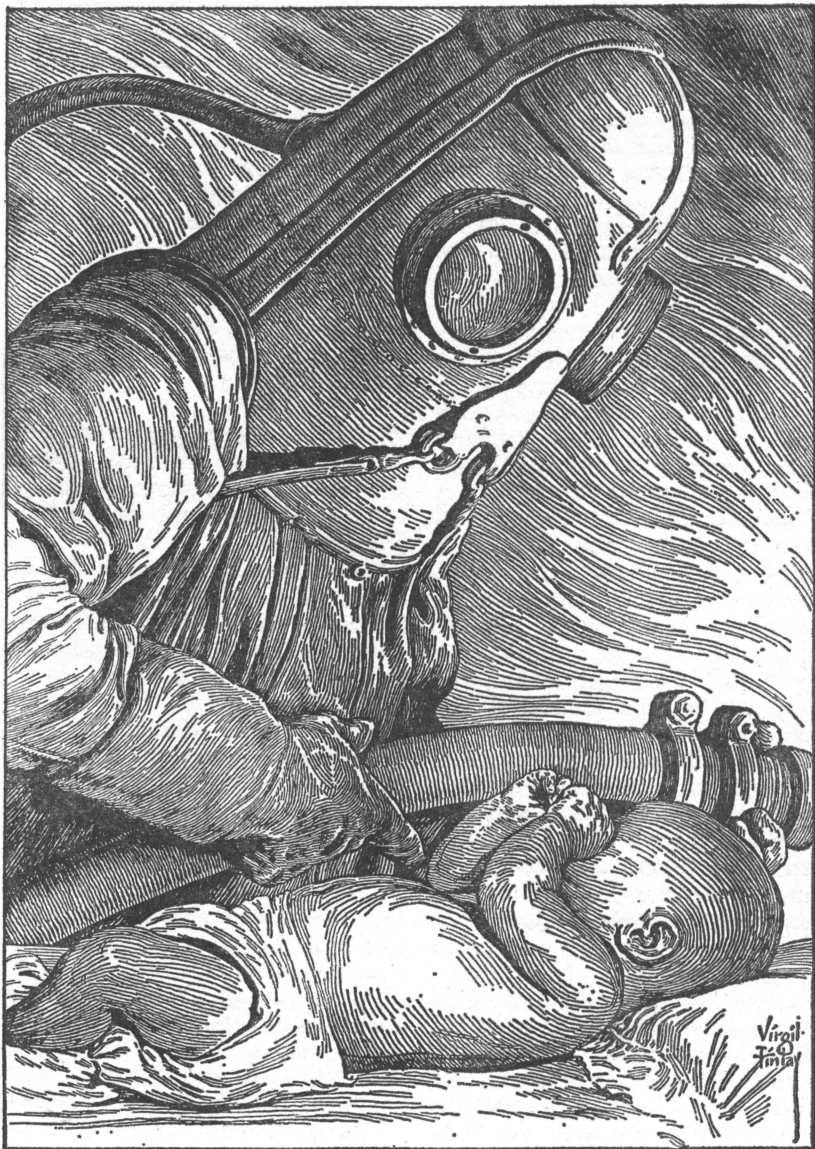
watching only one section of the wall, a section which he had learned to keep an eye on, although it differed in no way from any other to a casual observer. Joseph stared at this particular part of the wall more eagerly now, and the green dog was dropped and abandoned. The child actually could hear nothing but the soft, almost inaudible hissing of the hidden air ducts, but his own body gave him a clock without compare, a timer provided by nature. The graduated intensity of the light in the room was an unnecessary assistance. Joseph knew it was noon.

His eyes widened in pleasure, and he held out his small, plump arms in what was obviously a gesture of welcome, combined with an involuntary plea.

Soundless, an opening the size of a standard door had appeared in the section of the wall he was facing. Framed in it stood a massive figure, six feet tall, which advanced slowly with a faint humming noise toward the eager baby, who now crowed with pleasure. Behind the figure, the opening in the wall closed as silently as it had appeared — with one difference, that is. From the figure a six-inch thick, shining cable led back through the wall, fitting a circular hole in the base of where the original door had appeared with micrometer smoothness.

A rich, warm voice broke the room's silence and two long arms reached down to gather up Joseph, who was now panting inaudibly and squirming and wiggling with pleasure.

"Baby, hungry? Joseph hungry?"



Here's the bottle, Love. Easy now, don't try and drink it all at once. There's still din-din. Mashed lamb and carrots coming, you know."

His blue eyes half closed, Joseph lay back in the warm, padded cloth-covered arms and inhaled his milk with mighty slurps and gurgles. While he drank and sucked on the bottle's nipple, he looked up with contentment at the immobile pink and white plastic mask and the blue, glassined eyes. As he continued his meal, the tapes played steadily, reeling off cooings and murmurs, loving gurgles and bits of lullaby with programmed precision. The pre-set warmth of the circuits in arms and breast reassured the baby and the duraluminum limbs rocked him ever so gently.

Joseph belched and then continued to drink. All was well. Mother had come again. She always did.

II

Brigadier General Albert Hardwick was thin, brown-eyed and a bachelor, young for his rank at thirty-eight. The fact that he was a deputy-Director of G-2, Army Intelligence, and had been promoted to General's rank while serving in that capacity as a full colonel, made him even more of an anomaly. As he drove, he mused over these facts and others, while keeping a sharp eye on the road.

Only a superb combat record in Viet Nam and the acquisition of the Distinguished Service Cross and a Purple Heart with two clusters had warded off the mutterings within the inner circles of command. An M.A.

in Political Science, earned while recovering from wounds, was distinctly not regarded as an asset in some eyes, some rather senior eyes indeed. Hardwick had gone as an undergraduate to Michigan State and entered the Army through R.O.T.C. A good school, Michigan State, fine American institution. Still, not the Point, though, was it now? And a *general* at thirty-eight!

Hardwick drove steadily on through the flat countryside of southeastern New Jersey. He was not worried about the rumblings higher up. He had faced them before when it came to a crisis point, and his record had always been more than enough — his record plus a few seniors of very high rank who cared nothing for mutterings and valued performance alone.

Cruising along through the unending scrub pines of the Jersey Barrrens, illumined by a hazy September afternoon sun, Hardwick was not really concerned with military hierarchy. At the moment, the machinery of his mind was locked in on his present assignment, which presented enough puzzles for a decade of musing.

He had been working very hard of late. As head of G-2's Chinese desk, he had to co-ordinate with the C.I.A., the Navy, the Air Force and the whole network of Defense Department Intelligence. As the Far Eastern landmass gave birth to one confrontation after another in a grim and mounting progression, his task grew worse by the week.

The Chinese takeover of Burma in 1974, two years earlier, had been

awesome in its smoothness and precision. Burma had gone lock, stock and barrel into the Chinese camp, albeit on a privileged and semi-independent basis, led by its own neutralist rulers in a calculated gamble. The opposition leaders, including a former Secretary of the U.N., had been liquidated by their own secret police overnight, with Chinese assistance when necessary. In something like a week, Burma was solidly Peking communist, from Rangoon to the Kachin hills.

Everyone, including the Russians, had been caught napping.

For the next two years, a relentless dual pressure had been grinding at India to the West and Thailand to the East. Well fed on Burmese rice and led by professionals, the Chinese Armies, their proletarian militia outlook totally discarded since the counter-purge of 1968, were now armed with the latest weapons. And they were firmly based on all their perimeters, facing out from every point of the compass. The Russian relinquishment of Outer Mongolia to Chinese Influence was now a year old. The long moribund Viet Cong had re-emerged in strength and American troops were again engaged in full scale war from the South China Sea to the Thai-Burmese border, and not winning either. A strongly hostile note had intruded into U.S.-Japanese relations, and Japan's government was pursuing a cold and distant attitude to United States overtures. And a month ago, two well-armed, well-led Hukbalahap corps had erupted overnight from

the mountains of Western Luzon and attacked the Philippine Army in open and initially successful battle. Naval intelligence reports on a vast new fleet of Chinese nuclear-powered subs, mostly cargo and troop carriers, were pouring in. Everything, in short, was blowing up.

Why in hell, for the fiftieth time thought Hardwick as he drove, take a top man who is working a fifteen-hour day away from his job at the Pentagon and shove him out in the boondocks? Security Chief of *Project Inside Straight*, whatever that was! Super Q Clearance! No written orders! Unscheduled personal interview for assignment with the Secretary of Defense! Interview consisting of route information to Point Nowhere in Southern New Jersey, period. End of interview. Get on your civvies and go, man. He had gone.

The pine shadows were now darkening the narrow country road ahead. Hardwick spared a glance at his watch. Six-thirty. He braked as the road straggled lazily into a small clearing and a meaningless crossroads. A small wooden shack in front of which leaned a rusting gas pump, grayish hose in tatters, stood at one side of the road. Three broken windows leered over a sagging porch railing.

As Hardwick looked around, his eye caught a flicker of movement and a glint of metal at the left window, gone as soon as registered. His hands tightened on the Chevy's wheel, but his gaze swept calmly on. Mentally, he considered the memorized travel plan and came to a decision.

The small black car, an inconspicuous, two-year-old electrocompact, took the road opening to the left, away from the shack, and Hardwick drove on, his mind racing. His whole life from combat in Asia to the present had alerted him to be wary of observation, and for the last ten miles he was aware that he had been steadily watched. The few farm houses, the dark scrubby pines and green thickets, the empty roadside stands, the occasional battered trucks — all, he knew, had contained sleepless eyes. Whatever Project Inside Straight was, someone wanted the word sealed in.

Again he recalled the precise tone of Secretary of Defense Madden when outlining his route. Hardwick's hands again tightened on the wheel. Now, he felt a certainty that any deviation from the route he had been ordered to follow would meet with unpleasant results, results he would have no time to question!

The road at this point ceased to be even second-class and was no longer tar but plain dirt and sand. What kind of installation could this be? Hardwick cursed softly as he switched on the car's lights. He had seen no signs on the road of any vehicular traffic at all, and the road itself was in appalling shape. How did supplies and personnel get in or out? He steered around a large pothole, his right fender scraping into a tangle of blueberry bushes as he did so. It was suddenly almost full dark outside, and the last katydids of the season had started a chirping audible even over the crunch of sand under the wheels and the

faint hum of the battery-driven engine.

Suddenly, the road ceased. Before him, as he braked sharply, the lights shone on black, oily water. The road had ended at a tiny, forgotten landing on a broad creek winding through the Barrens. A rickety dock stood forlornly at road's end, thrusting out ten feet into the stream, but that was all.

Hardwick switched off the engine and sat for exactly five seconds in the utter silence that followed, keeping time by staring at the sweep hand on his wristwatch, glowing in the darkness of the front seat. At the fifth second he opened the window wide and began to whistle a tune. It was *Melancholy Baby*. After precisely fifteen seconds, he stopped whistling and sat very still. Not a sound broke the silence outside, save the faint eddying noise of the water lapping around the piers of the little dock.

Then an eyebeam from a pencil flash hit him square in the face. Although he had heard no whisper of movement, he saw that someone was now standing next to his window.

"General Hardwick?" came a pleasant soft voice.

Feeling slightly ridiculous, he answered, "Aces over Eights."

"The Dead Man's Hand," said the voice approvingly. With that, a spray with an unfamiliar, sweet, pungent odor lanced in the window and settled over Hardwick's face in a cloud. He barely had time to wonder what was going on when the

powerful anaesthetic knocked him out for the count.—The trip was over as far as any volition on his part was concerned.

III

He awoke suddenly and sat up in bed, memory returning with a rush. He saw that he was wearing comfortable pajamas. Looking around the small room, he noted first a uniform of his own rank with all of his correct decorations hanging on a hanger from a wall hook. Under it on the floor lay shoes and socks, both O.D., and a single-starred cap straddled the hook.

He realized that he felt fine and got out of bed and stretched, still eyeing his surroundings. The drably-painted room was windowless but the air seemed fresh. All around him he was conscious of the pulse of machines. Could this be a power plant of some kind? One of the two visible doors opened on inspection into a tiny shower-bathroom; the other, he guessed a hall door, was locked. What seemed to be all of his personal possessions lay neatly on top of a bureau near his uniform. Curious, he opened the bureau drawers and found a complete supply of O.D. underwear, shirts, handkerchiefs and such, all in his size. He seemed to be booked in for quite a stay.

At this point a bell pealed gently high on one wall, and a voice came from a hidden speaker apparently concealed in the central light fixture on the ceiling.

“Please shave and dress, General.

You will have visitors in exactly fifteen minutes.” There was a pause. “Repeat,” said the voice, “Fifteen minutes.” There was an audible click.

He stood with his hands behind him exactly fifteen minutes later, full-uniformed, and saw the locked door open. Outwardly calm but extremely annoyed within, he watched two people come in and close the door.

In front was a woman, which surprised him, although his face stayed expressionless. Women do not normally achieve high rank in maximum Security operations. She was about five-seven, with brown hair and eyes, quite good-looking without being a raging beauty. Her eyes were sharp and very intelligent. Hardwick guessed her age at about thirty-four and was surprised later on to find she was four years younger. She was wearing a well-cut brown suit and no jewelry.

The gray-haired man who stood quietly in back of her also surprised him, but for different reasons, and his impatient anger stopped mounting right there and then.

He had not seen Thomas B. Allen for over two years, but the mustached C.I.A. senior field agent, who somewhat resembled a caricature of Dr. Watson, was a man whom he respected anywhere or at any time. If Tom Allen was in this strange affair, he had better keep quiet and see what happened.

The woman looked at him for a moment and then came forward, hand outstretched and a smile on her face.

"General, you look like a man who needs an apology. I have nothing to apologize for and neither does Mr. Allen, but we apologize anyway. I'm Dr. Joanne Butler, the Technical Director of Inside Straight, and Mr. Allen, whom you already know, is the Security Director. Between us, we've been running things here. You're our new boss."

Mechanically, Hardwick shook hands with the woman, then with Allen, while trying to grasp this last sentence. His face must have relaxed and revealed some emotion, because Dr. Butler laughed, a sound Hardwick absently noted as low and pleasant.

"I'm not going to stay," she said. "Mr. Allen will fill you in, and later we can go further into the job. I'll simply say that all three of us are here at the direct — and in my case *personal* — request of the President. We're not playing around for the fun of it."

"I never thought we were," said Hardwick, flushing slightly.

"I know," she said. "But I wanted to make it plainer still. This is the biggest thing you've ever touched, General. Nothing and nobody must stand in its way. Too much has already been sacri . . . has been done, by everyone, for this to fail. Do you understand me?"

Puzzled at the sudden break in her otherwise calm voice, Hardwick merely nodded. She had been about to say "sacrificed" and had changed her mind, of that he was certain.

"Good," she said, her efficient manner apparently restored. "I'll see

you later then when Tom brings you along. Bear with us until you know the whole story. You have an even tougher job than ours coming up."

After the door closed behind her, the silent Allen seated himself in the room's one chair and pulled out a horrible-looking old pipe which he lit while surveying Hardwick from opaque gray eyes. He waved a hand at the bed, and Hardwick sat down on its edge while his mind went racing back into what he knew about Allen. Allen was the man who, as a young agent, had broken the Mossadegh government of Iran almost single-handed and then gone on from strength to strength, until nowadays he practically wrote his own orders. His brown suit and scuffed shoes, plus the gray, bristly mustache made him look like an out-of-tenure, absent-minded professor at some Eastern college, but Hardwick knew better. Very few people did. He therefore waited, with as much patience as he could muster.

His pipe going, Allen finally leaned back and spoke.

"You're looking well, General, but pale. The pressure getting pretty heavy back at the ranch?"

"I don't imagine that you're cut off from news here, Mr. Allen," he answered. "The roof is falling in all over, in every way."

"Call me Tom," said Allen, looking shrewdly at him through a cloud of blue smoke. "And I'll call you Al."

"All right, Tom," said Hardwick. "We'll be pals, even chums, in no time. Now what in hell is this weird business all about?"

"What do you remember reading or hearing about the Houston General Hospital disaster?" Allen asked suddenly, still watching him very carefully.

Hardwick thought for a second. This was obviously not a time for idle questions.

"Yes, I remember it fairly well. Some volatile poisonous gas or something got into the central air ducts, and the whole place went *blooie* in seconds when it was ignited. The place was deliberately set on fire to destroy any traces of what was there, as I recall. Lot of people killed by the gas first. So what? It just happened earlier this year, didn't it? I was in England at the time."

"That was eight months ago," said Allen almost to himself. He sucked noisily on his pipe and exhaled a cloud of awful-smelling blue smoke before continuing. His voice had suddenly become precise and metallic.

"Because of that disaster, you were sent here under highest security orders to familiarize yourself with and take command of the installation in which you now find yourself. You were trailed from Washington out into the country, watched every yard of the way and then knocked out and dumped into a helicopter, which probably transferred you to one or two others on route. The only thing I can tell you is that you are nowhere at all, probably not by a thousand miles, near to where you last thought you were. This installation is so secret that probably not more than ten people in the world know its exact

location. That includes me. I came here the same way you did. I think it's in the continental limits of the U.S., guess it may be underground, but I'm not sure of that either. It could even be underwater. Still interested?"

"Go on," said Hardwick, keeping his face impassive.

"Okay. You are going to have to familiarize yourself in detail with this whole place. There are over a thousand personnel here, mostly men, all working as maintenance and security. They were all — except one — kidnapped and convinced later, as I was, that this was a job that had to be done. A whole lot of the place is simply nothing but machines and more machines. You can always hear them. Half the people here are technicians, the other half guards. Half the technicians are concealed guards and half the guards are reserve technicians, held in case of emergency. Any questions yet, or do I go on?"

"Dr. Butler is the non-kidnappee, I suppose?" Hardwick asked thoughtfully.

"Pretty smart. Yes, she's the one. A Ph.D. in Organic Chemistry. She and the President, or maybe the Secretary of Defense, grabbed the others, I suppose. No, don't laugh. When you see what we're guarding and why and understand your part in it, maybe you'll believe anything. This place kind of gets to you."

Hardwick thought that if a place could get to Thomas Allen, on whose head the Soviets had once put a no-questions-asked price of one hundred thousand dollars, it ought to be worth looking at.

Allen regretfully knocked out his ash on a saucer from the night table and stuffed the pipe back in his pocket.

"No smoking outside your room, the dining areas and lounges," he said.

"I don't smoke," said Hardwick. "Do you really believe that this place could be underwater?"

"Wait until you see it," said Allen glumly. "It might even be on the Moon. Let's go take a look."

Hardwick glanced at his watch. It said eight o'clock. "Do I get any breakfast?" he asked.

"You get anything you want, except Out," answered Allen. "You're the new boss, subject only to Dr. Butler and the Science staff in pure technology. I'll walk you over to the cafeteria and show you what there is to be seen on the way.

"Oh, yes," he added, reaching into a pocket, "here's your new badge. Pin it on at all times outside this room. This is a very trigger-happy place."

"What's everyone so afraid of?" asked Hardwick, pinning on the large blue-metal badge. It bore inset a recent picture of himself that he didn't remember seeing before, a lot of mysterious numbers and the words *Director of Security*.

"Killing everyone in the country and maybe the world, I imagine," said Allen flatly and opened the door. "After you."

They emerged into a narrow corridor, well lit by a continuous fluorescent panel in the ceiling. The sound of machinery was louder now, a continuous, muffled vibrato in the back-

ground, not loud enough to interfere with speech, but rather like traffic noises heard from a lofty New York apartment.

Down the corridor they were following, Hardwick saw a figure standing. As they approached, a tall lounging man in blue coveralls with a badge on them marked *Security* straightened up and waved casually. He was a light-skinned Negro.

"Jim, this is General Hardwick, our new boss. I'm showing him around. He goes anywhere, any time. Al, meet Jim Tableman. I don't know all the troops, but Jim was one of the first to arrive."

"Glad to see you, General," said Tableman and shook hands. Hardwick noticed that the left hand stayed in his coverall pocket.

"Got a gun?" he asked casually.

Like lightning, a .357 magnum snub nose emerged from the pocket, then vanished again, all in one fluid motion.

"Not bad for an M.A. in Biochemistry, is it?" said Allen pleasantly.

"Does he just stand here all day or all watch?" asked Hardwick, turning to Allen. He was getting a bit irritated again by all the apparent mystery.

"Show him what else you're here for, Jim," said Allen. "Stand still, Al, and don't move. My authority, demonstration purposes, Jim."

IV

Hardwick saw Tableman's hand flick out to an area of wall which appeared to the eye no different from any other. As Tableman

touched it, a steel panel slid out from the equally unmarked ceiling and dropped to the floor with a muffled thud. The corridor ahead of them was now totally sealed off by what appeared to be an air-tight, bullet-proof barrier. The whole thing had taken less than a half-second.

Tableman waited and at a nod from Allen touched the wall again. The steel shutter slid up as fast and as silently as it had come down and the empty corridor stretched before them once more.

"Thanks, Jim. Come on, Al. We can talk as we walk, and you want breakfast."

"How many Jims are there?" asked Hardwick as they strolled along. The corridor was always gently curved to the left, and Hardwick guessed that they were in a vast dome-shaped or circular structure of some kind, with many levels, both up and down.

Allen grinned. "Do you mean guards, biochemists or barrier watchmen?"

"Barrier watchmen, I guess."

"One hundred and seven. Each one knows his own wall section trigger, and none of them knows any of the others, except me and eventually you."

"You've memorized all those sections, all those hidden buttons?" asked Hardwick incredulously.

"No great trick for a good foreign duty agent, my boy. I'll teach you the method. You've been at a desk too long."

They passed other coveralled men and even one woman as they walked along. Despite his previous disclaimer, Allen seemed to know all of them

by name. Occasional doors broke the smoothness of the corridor on both sides. Through one of them which was open, Hardwick glimpsed a lofty room almost filled to the ceiling with what looked like vast, throbbing turbines. It reminded him of a ship's engine room he had once looked at.

"Air re-conditioning boosters," said Allen. "The place is filled with them. Well, here we are at the restaurant."

He led the way through a glass-panelled double door, and Hardwick found himself in a large, pleasant cafeteria. People of both sexes, all sporting identity badges on their coveralls, sat about in groups or alone. Some read while they ate; others talked, and a few were writing in pads or on sheets of paper.

"Looks like the dining room of the Rand Corporation," remarked Hardwick as they chose a vacant table and sat down.

"The Rand Corporation couldn't get the three top cooks off the atom sub fleet," was the answer. "Two others worked for the Waldorf. Order anything you like. They've damn near got it."

A pretty waitress, also in coveralls and badge, took their order and left. A few people looked at Hardwick and away, he noticed, and then spoke to one another. A steady hum of eating noises, crockery and conversation provided a background. The place could have been duplicated, save for clothes, at any number of science establishments he had visited at one time or another.

Hardwick asked few questions

when the food arrived. He had ordered breakfast without thinking very hard, but the food was excellent, the eggs and bacon being exactly as he had specified. Over his second cup of very good coffee he again began to question Allen, who had been equally silent while eating.

"What next, Tom?"

"You get to see Dr. Butler — that is, after seeing the reason why we're here at all. That can be done on the way to her office. You'll understand a lot better what's going on if you see that first."

Finishing his coffee, Hardwick rose and followed Allen out of the noise and into the seemingly endless corridor outside.

They had only passed a couple of guards when Allen stopped at a blank door and gestured to Hardwick to stand beside him. Apparently there was some sort of scanning device in the featureless metal door, because it slid back at once into a grooved opening. Beyond the opening, a guard waved them forward into yet another corridor, but this time set at right angles to the first.

"How can every guard know everyone here?" asked Hardwick as he followed Allen on.

"They don't," was the answer. "In each specified area, only certain people of the whole population have any business. Anyone else doesn't get in; and if he tried, a report would go in to security center at once. Very fast action follows. I go anywhere, and so does anyone with me, of course."

They entered other doors, passed other guards, at one point used

a ramp and at another, an elevator. It all seemed confusing to Hardwick, and he realized that it would be equally confusing to anyone who tried to penetrate the place from outside and managed to get past the outer guards.

"What's the level of education here if an M.A. in Biochemistry is a guard?" he asked, a bit further on.

"I have a B.A. in journalism from Connecticut," said Allen, "and I must be at the bottom of the ladder."

"Then this place was all actually built by these brains, if I understand you correctly, and they're now all cheerfully doing guard and maintenance work as a result?"

"I came late," was Allen's reply, "but they even had me doing some electrical wiring. The whole place was built in one and a half months, starting with the Center. The first work was done entirely in space suits, around the center dome, but we're not in space, despite what I said earlier. Another minute and you'll see something. This is the last checkpoint."

They stopped before still another featureless door. When it slid open, it revealed a metal desk and two more blue-covered men just inside, one seated behind the desk, one standing. They both nodded affably as Allen disgorged a short-barrelled Smith and Wesson .38, a German Fallschirmjäger knife and a set of C.I.A. picklocks on to the desktop. Then he waited with arms raised as the standing man went over him in a thorough frisk.

"You too, Al," he said. "These particular boys have orders to let only



certain people, of whom you are now one, in here. But no one goes in unsearched, ever, including Dr. Butler. That's a house rule."

Hardwick was searched in turn and a small pocket knife was added to the pile on the desk.

"You see," continued Allen, "this is the inner circle. There are no guards from now on, only a few monitors and technicians. Everything that needs doing from here on could be done by robots and servomechanisms in an emergency, with the rest of the place sealed off completely. This last check is one against plain and simple lunacy. I could do a little damage here with my bare hands, but not much. So I give up the arsenal and pick it up on the way out."

By this time, they had left a short corridor and were now in a circular one, into which the first had led. A curve, like that of a rounded dome, made up one wall, as if the corridor in which they stood were circling a giant sphere. Near where the two had paused, a woman in a white lab coat was staring through a square glassed port in the dome wall. Her back was to the two men, but as they walked over, Hardwick was not surprised to see Dr. Butler turn and face them.

"I wanted to see your reaction, General," she said, unsmiling. "I have few diversions these days, and this is one of them. Come and meet the ruler of the world."

Hardwick walked to the inch-thick window and looked in and down.

On the padded white floor below

him, Joseph was having his morning nap. As Hardwick watched in amazement, he stirred in his sleep and a small pink thumb found its way to the cupid's-bow mouth.

Still unable to comprehend what he saw, Hardwick stared down at the sleeping baby for another minute and then turned back to stare in equal amazement at the other man and the woman who were watching him. In their eyes he saw a seriousness which left him no room for doubt. And in the woman's expression, Hardwick sensed a terrible pain, a pain which no man could ever feel.

There was a moment of silence as the three looked at each other and then Allen grunted.

"Come on back to Joanne's office with us. You've just seen Joseph, the most dangerous creature on earth. Now, you really need information! Your own mission, Al, is now starting, and you have a lot to learn."

V

Exactly five weeks later to the day — rather the night — Hardwick stood on the sloping deck of the United States Polaris sub *Anthony Wayne* and spoke quietly with a group of his fellow passengers.

Around the ship, little waves lapped at the hull, and in the near distance a muffled roar proclaimed surf breaking over the outer reef of a small atoll. The warm night air of the South Pacific flowed over the immobile submarine, and a blaze of stars in the black sky shed almost as much light as a northern moon at full.

Hardwick was exchanging idle talk with a tall gray-haired navel officer when the latter was called away by a voice from the next group forward.

"How much longer, Admiral? Isn't it time yet?"

"They're late now, Sir," was the answer. "We expected that. Sonar and radar report them out there, snooping around. Probably a matter of face, making us wait. We have orders to stay here for two hours, unless there's a counter order from Pearl."

A low call from the top of the submarine's towering mast sent the admiral hurrying over. The civilian to whom he had been speaking moved along the deck to where Hardwick was standing gazing out to sea.

"Think they're coming, General?"

"Mr. Secretary, I hope to God they're coming." Hardwick tried to read Defense Secretary Madden's expression by the tropic starlight, but the eyes in the pale face were simply pools of shadow.

"They said they'd come," he went on. "Their ambassador in Warsaw guaranteed all the arrangements. I think they'll come. What in hell have they got to lose?"

The tall figure of the admiral had returned, and he now reported to the Secretary.

"The instruments say a big sub is heading away from the pack out there and moving straight in at ten knots. I think you'd better get ready."

"I have my overnight bag and here's Chief Justice Reeves with his. Nothing left to do but for us to thank you for the trip. Good luck to all you gentlemen."

"Good luck to you, Sir, and you, too, Mr. Chief Justice. Hope to see you soon."

Hardwick continued to watch with attention when a little later, the squatter, more massive form of the Red Chinese atom sub moved alongside the *Wayne*. You never knew what tiny detail would come in handy in intelligence work. He had seen pictures of the new enemy vessels before but the real thing was awe-inspiring, considering that the Chinese navy of fifteen years earlier had been mostly P.T. boats and wooden minesweepers.

He was at the head of the gangway when the Chinese delegation appeared and he saluted them formally. The three uniformed members of the body saluted in return, albeit stiffly. The five civilians simply ignored him and walked on past to the deck of the U.S. vessel. Two officers motioned them to follow, and they all went below decks. Hardwick continued to watch the other vessel.

He watched the Chief Justice and the Secretary of Defense of the United States and their two aides enter the hatch of the enemy sub, now cast off, and then the hatch close. The great ship moved off at once, heading out to sea to join the invisible armada which had accompanied it. When it had vanished from sight, he went below to meet the newly arrived passengers.

They were standing about in the special lounge which had been fitted out for them, faces immobile, not even talking, when he entered. He closed the hatch behind him and

moved to the center of the cabin, while they all turned to stare at him.

"Good evening, Gentlemen," he said, speaking in impeccable Mandarin. "I am Brigadier General Hardwick of the American army, your host for the duration of this journey, until you are returned to your compatriots. Please let me know of anything which I can do to serve you. Any questions you have will be answered to the best of my ability, barring certain matters of security, of course. May I know your names? Do you wish tea?"

Sixteen dark eyes regarded him implacably. But it was obvious that someone had to speak, and the senior officer, a gaunt man who wore the gold and red rank badges of a Marshal of the Chinese People's Army on his immaculate khakis stepped a pace forward.

"Tea will be welcome, General. I am Marshal Sun Lo Jen, chief of this delegation. My companions in the service are Generals Wu Sen Fang and Li Peng, who command respectively the Sixth and Eighth Armies of the People's Defense Force.

"These other colleagues are Drs. Kai Li Po and Chang Hsien of our Central Medical Bureau and Drs. Feng Hsi Liang and Kuo Tai Min of the People's Ministry of Defense, Chemical and Bacteriological Division."

"I am honored to meet all of you," said Hardwick politely. "Especially General Wu Sen Fang, who so closely resembles another officer, General Lo Jui Chen, the recently

appointed Director of all the Combined Security Services of the Chinese People's Republic."

"I in turn am flattered by your attention," said the now unmasked head of all the Chinese intelligence and police forces. He was a short, powerful man with an oval face, high cheek bones and close-cropped, black hair who smiled politely at Hardwick.

"We in turn are honored to have a Deputy Director of U.S. Army Intelligence serve as our guide," he continued in very fair English.

Hardwick nodded. Point and riposte!

"Here's the tea and some sandwiches," he said as the door opened to admit a parade of tray-bearing stewards. "If any of you would rather go straight to bed, I can have you shown your quarters. We'll rendezvous with our carrier at about eight o'clock tomorrow morning."

"I think we would all like a little talk first," said Lo Jui Chen, who appeared to be quite undisturbed by the disclosure of his identity. Although militarily ranked by the Marshal, he was a member of the Chinese Politbureau and far more important a man. Since he could not have hoped to deceive U.S. intelligence, the name change must have been for internal Chinese consumption, thought Hardwick to himself. There must still be power plays going on back home in Peking, then.

"There is no point in wasting time in foolishness," continued General Lo. He had reverted to Chinese, which made Hardwick sure he wanted his associates to understand perfectly what he was saying.

"Where are we going, if it is not too much to ask?"

"We are going, as I mentioned earlier, to meet a carrier," said Hardwick. "Why don't we all sit down for a moment, and I'll sketch the trip?"

He waited until the eight Orientals had seated themselves in a semi-circle around his own chair and were sipping their tea before going on.

"From the carrier we will fly to the States, board a sealed helicopter and go to an unnamed installation. In that installation, whose exact location I don't know myself, by the way, you will be shown certain things and allowed to move about wherever you wish. You will be accorded free use of laboratories and equipment to make any tests you desire. I saw, from the cases you brought along, that a great deal of testing equipment was included in your baggage. That's fine as far as we are concerned. You will be given every facility to use it. I must, however, tell you that you will be rigorously searched and so will your baggage before arriving at the site. No communications devices or electronic homers of any kind will be permitted.

"You will be shown quarters at your destination which you may or may not believe to be free from bugs or observation. Anything of that nature you find you are welcome to destroy.

"At the end of seven days or even longer, as pre-arranged with your government, you will be allowed to leave the way you came. You will be expected to send one uncoded signal

authorizing the re-exchange of Chief Justice Reeves and Secretary Maden at this same rendezvous. Are there any other questions?"

"I have so many that they would be completely pointless," replied General Lo coldly, "and I imagine my companions feel equally curious. To be frank, which you Caucasians consider a virtue, I believe neither in any of this fantastic story of a world-destroying weapon nor in even one of your assurances. I am obeying orders, however, and there is no more to be said. We would prefer to be left alone as much as possible. Perhaps we may be informed of the meal times and rest periods? Otherwise, we would wish to have as little as possible contact with your personnel, and certainly none of a social nature."

"As you wish, gentlemen," said Hardwick. "I will say 'Goodnight' in that case. You can reach me at any hour if you want something." He bowed and left.

VI

"They'll be here in half an hour, Joanne," said Tom Allen to Dr. Butler. She merely looked at her watch and said nothing.

A week had passed since a sealed helicopter had brought Hardwick and the eight Chinese by night to the landing area of Project Inside Straight, which Hardwick was now fairly sure was under a mountain, somewhere in the far West of the United States.

The three, though Allen least of all, betrayed the strain of the past

week by abrupt, staccato speech and nervous tension, try though they might to control it. Now, as they waited in the small auditorium for the Chinese to arrive for a final briefing and question period, they found it hard to sustain conversation.

"Tom," said Hardwick abruptly, "can you offer any opinion on what their reaction has been? I'm supposed to be an expert on Chinese affairs, but I've never pretended that my knowledge wasn't mostly theory. I've always felt that the Defense Department people in the field were miles behind you C.I.A. types in that kind of training and in getting under the skin of an alien thinker."

Allen gnawed meditatively on his unlit pipe for a second before answering.

"Hard to say, pal. I haven't been eyeball to eyeball with these guys since the last Khamba uprising in Tibet, and that was quite a few years back. They certainly sent their top spooks, I'll say that, especially General Lo. He expressed great regrets that my wife had died last year, by the way, and most of the people on our own team never even knew I had one. Wise bastard!"

He went on. "Well. I think they're edgy. Lord, why wouldn't they be? You both know all the daily tests we run on Joseph. They ran their own, and they all checked out, just as we knew they would. The one freak chance of a foulup would have been for him to lose his weird potential, maybe due to some obscure hormone or glandular change. I mean right while they were here, actually testing him, and that isn't likely or possible."

He snorted and waved his pipe. "They're not crazy people, so I guess they must be scared. Hell, we're scared and we live with it day in, day out."

Hardwick looked over at Joanne Butler. Her expression, normally calm and impassive, was now, to his trained eye, getting a bit frayed at the edges. He felt again a quick moment of tragic empathy with this good-looking, quiet woman who had charge of so much grief and awesome power and who had carried the responsibility so well and bravely.

She sensed him looking at her and smiled briefly as she looked up, her face softening for a moment into that of a young girl. He had never known a woman who affected him this way, thought Hardwick. He had always considered himself a hopeless bachelor, a man who had found passion at rare and fleeting moments and then gone on back to his work. But now he felt a daily, almost hourly, surge of protectiveness toward Joanne and was detached enough to know what it meant.

Another thought also jogged his mind before he buried it forcefully. As the top boss of Inside Straight, he had, for the past month, spent many hours in going through the massive and voluminous personnel files. There, he had encountered almost in passing a tiny bit of information, something which had set him to thinking hard. He had been inclined to tell Allen when the first bizarre thought had stirred in his mind, but had not done so, and now he was

glad. He suppressed the unbidden thought firmly and smiled back at Joanne as warmly as he could, conscious that the strain must be as visible on his face as it was on hers.

"It's ten forty-four, and they'll be here any second," said Allen. "Any last minute ideas?"

"We've said it all," the woman answered. "All we can do is let Al give his little speech and wait for questions."

As she spoke, a door at the far end of the auditorium opened and the Chinese delegation entered, the three military officers in front as usual. They had one Chinese-speaking companion, who had turned out, to Hardwick's surprise, to be Tableman, the chemist turned temporary gunman. It seemed that his job at his university had been that of a translator of Chinese papers on his subject. Not content with reading knowledge, he had gone on to learn the spoken language as well. It was he who had handled the scientists in the party and had conducted tours when Hardwick and Joanne were not available. He sat down quietly in the last row of seats while the Orientals moved up and took the first row.

Hardwick stood up in the center of the small stage, leaving the other two seated behind him, and addressed his audience in Mandarin.

"Good morning, gentlemen. Before we commence this final briefing, I must formally ask whether you consider your task complete? Is there anything more you wish to see, or feel you have not been shown, concomittant with your

acknowledged purpose in coming here? It will be best to save time by answering now."

The Chinese glanced briefly at one another, but no one said a word. Then General Lo, long since fully and openly accepted as the delegation's real leader, stood up, nodded abruptly and spoke before resuming his place.

"We feel there is nothing we have not seen. Whether the tests are reliable under your apparatus and supervision is another matter, but we have done all we can here."

Hardwick grinned, but only to himself. The grudging admission was all he could have hoped for at this point. No modern Chinese, least of all a high Communist official, could publicly admit that anything Western was not somehow suspect, even if no tangible evidence existed.

Outwardly unmoved, he continued.

"In that case, I will now recapitulate the whole story, keeping it as brief as possible. As you now know, the history of Joseph began eight months ago in Houston, in the state of Texas. An outwardly ordinary baby, the son of Mr. and Mrs. Lucas J. Hittle, was born on January 15, 1976. The birth was normal in every respect, save one.

"As the child was born, everyone in the operating room died. Suspecting gas, an intern watching through glass from outside the room donned a smoke mask from a fire prevention kit on the wall, entered the delivery room and saved the baby, who was still barely out of his mother's body. The cord was cut and knotted, and the child kept warm.

"The mask and uniform, despite gloves, were of course not completely airtight, and the intern also died, but only *after* he had summoned help by phone. As fast as that help arrived, both doctors and nurses died within seconds of entering the room."

Hardwick paused and studied the impassive faces before him and then went on.

"The baby was not yet suspect, but an alert was broadcast and the hospital evacuated. Not, however, before many patients and staff members in adjoining corridors had also died. The hospital's excellent air circulating system probably saved the others.

"Finally, fully suited and masked firemen entered the hospital and found the baby crying in the chamber of death which had introduced him to life." Hardwick still wondered about this last line, but Allen liked it, so it stayed in.

"By chance, a brilliant and famous doctor was present. He heard of what had happened and was the first to pick out the baby as a cause of the mass deaths, working on the principle of Occam's Razor, the line of least resistance. He, that is the doctor, persuaded everyone to give out no news and to handle Joseph with every precaution for the time being.

"He also called Washington and reached a very high government official whom he had treated in the past. As a result of his urgency, the whole hospital area was sealed off and security measures of a drastic nature were established. The press was excluded, and the Intelligence

service chiefs were called to a meeting in Washington."

Hardwick paused and poured himself a glass of water from a pitcher on the table next to him. No one spoke, and after a mouthful of water, he continued.

"Meanwhile, the firemen and medical staff who had cared for the baby in airtight masks and suits were now also dying, dying as they removed the suits and came into contact with a residue, however faint, of the most terrible poison ever discovered!

"And those with them were dying, from mere contact with the suits!

"It was possible to localize the whole menace only because the suits and masks were removed on the hospital premises or in an area close by. Chance again. If one man, still suited up, had gone back to the fire station . . .! None did so, luckily.

"By this time, Washington was fully alerted and subsequent suited personnel were drenched, on orders, with an hour-long spray of almost corrosive chemicals before removing their protective clothing and helmets. They were volunteers, these brave men and women, even so, because they all expected to die. They did not, however, and a check showed that their equipment was no longer lethal. This was the beginning of our project here, the first evidence that this incredible pathogen was controllable or had any limits.

"Washington now went into full operation. The newsmen and everyone else were told that a lethal gas had been released by a maniac into an air-conditioning duct. It was open-

ly hinted that it might even be radioactive, although this was not flatly asserted. The area around the hospital was cleared for a distance of fifty blocks, and the hospital was first scientifically burned out and then razed to nothing but ash and rubble. A continuous chemical spray was maintained for a week over the ashes, every inch of them. Even so, a terrible fear gripped the few who knew the real story. Would the burning, demolition and chemical bath do the trick? Or would the smoke *spread* the instant killer, whatever it was? The chance had to be taken, since the alternative might be worse.

"Joseph, by now definitely identified as the carrier of the lethal pathogen, was secretly, with every due precaution, removed to a hidden site, and with him all who knew the truth of what he was.

"I am the first person who knows this story ever to leave this installation, and I do not know the area I have left and to which I returned with you gentlemen. We may be under the Rockies, in Mammoth Cave or buried under an oil rig offshore in the Gulf of Mexico. It is not important. What *is* important is what followed the decision to save Joseph, to hide him and to try to find out what caused his monstrous inheritance. I will now turn this meeting over to Dr. Butler, who has presided over this project from its inception. Since not all of you gentlemen speak English and Dr. Butler speaks no Chinese, I will translate. Those of you who do speak English can insure that my translation is an accurate one."

Joanne Butler got up and came over to stand beside Hardwick. He saw her swallow once, and then she began to speak, her low voice carrying clearly to the men seated below. She paused at the end of every short paragraph, and Hardwick put the words into his best Mandarin, before she re-commenced.

"Gentlemen, you now know who I am. I am a biochemist who, among other things, has worked for some years for the American National Foundation of Science. I also hold a degree in psychology, which helped in my selection for this position.

"I was virtually kidnapped in the middle of the night by agents of the U. S. government and taken to an interview with three of the highest officials of this country. At first, I thought they were mad when they explained what had happened and what they wanted me to do. My patriotism was not prepared for such a test. And, gentlemen, it still is not!"

She waited, while Hardwick translated and then continued, her voice soft and even.

"My patriotism is not, as I said, up to the test of running the scientific side of this project. But something else is, my feeling for all humanity."

Hardwick expected at least a cynical smile from General Lo at this point, but to his surprise, noted nothing of the kind. Indeed, the Red security chief had leaned forward to hear better, and his face was completely serious.



Virgil
Finlay

Joanne went on, after the translation.

"When I heard the proposal that this child and his awful gift be used as the Ultimate Weapon, I was revolted to every fibre of my being, I refused the task for which I had been selected. But — I was persuaded at least to listen further.

"I was told what the leaders of my government planned. They desperately fear a third World War, a war of total annihilation using every ghastly weapon ever devised, from bacteria and gas to the cobolt Hell bombs. They felt, and feel, that such a war is perilously close. They felt humanity had one last chance, and that chance was Joseph — whom they had christened the Deathchild.

"It was made very clear to me," she went on, "that there would be no conquest of any foreign country, China or any other. China would be the target for Joseph, however, if all else failed. Russia could be discounted, and even allied, since the Soviet staffs were already in secret and joint discussions with those of the West.

"But China and her new arsenal of conquest, her new tributary states and her new attempts to rule the entire mass of eastern Asia, meant war. This was demonstrated to me in a hundred details. Whether you gentlemen here agree or disagree is not important, since I believed it and I still do.

"I have been in charge of this place and all that it implies for over seven months, which I regard as seven months of torment. I have helped in

and supervised the chemical tests and extractions of fluid from the baby's body and their subsequent processing. You have seen and tested the arsenal of test tubes which resulted. They are my work. You have seen the fantastic and hitherto-unheard-of safeguards used to take care of the Deathchild and also to protect him. You have been allowed to talk freely with the scientific staff of this place, to examine and pry into every detail, save for certain security measures, that exist here. You have seen the extraordinary robot mother designed to keep the baby in a happy state of mind as well as body, since we dare not tamper with anything that affects his overall well-being. And you have observed the baby and his own care and treatment."

Hardwick thought he heard a very faint catch of breath when Joanne said "mother," but he could not be sure. He dismissed the idea temporarily and went on with his translating. The thought could be recovered. She continued, her voice steady:

"You have seen all the films of Houston General Hospital, the death films and those of the destruction. You have, and I stress this point for the scientists among you, been allowed to examine the test animals, and have seen that the new death does not affect them. It is reserved for humans, who brought it into the world.

"You have had access to our shielded labs and have run tests of your own, utilizing a lot of equipment you brought with you. You have examined all the cunning air and waste disposal devices, the flame in-

cinerators, the filters, the chemical baffles. Is there anything you have not seen and still feel you must?"

Again there was silence, and again no one spoke. Eventually, after a look at his silent companions, General Lo shook his head.

"Very well," said Joanne. "My responsibility for this group is over. I return you to General Hardwick." She walked back and sat down next to Allen again, shutting her eyes as she did so, from what seemed simple weariness.

"You have heard Dr. Butler speak for, and to, the scientists," said Hardwick, resuming his conversational style. "There are a few other points to be mentioned. We have no clue to this day of Joseph's lethal mutation. No germ or bacteria, no virus, absolutely nothing, has been isolated. We remain as ignorant as at the beginning on *what* we are dealing with. You have seen the medical records of every member of the baby's family which we could provide, from birth to death, as far back as we can reach. There is nothing, no hint, no lead, in any of them. All were ordinary, simple Americans, differing in no way from the norm, physically or mentally. His father, poor man, is in a well guarded mental home, suffering from shock."

Hardwick's voice hardened. "But we can, by using the baby's wastes, his blood, his perspiration, dilute and render usable in a military sense the death that he carries. We have done so on volunteers, people who were inevitably soon to die anyway of disease or of natural causes. These mag-

nificent people, all doomed to die in any case, gave the brief remainder of their lives to test Joseph's continuing power to kill. You have seen the films and records of the men and women who died, not knowing why or how, to make sure the Deathchild could still kill. Their passing, as in all other cases, was instantaneous and painless. Beyond that grace, we have nothing to give them but honor.

"Two of your members selected certain of their bodies, carefully preserved by freezing, and performed dissections with every device we could give you to aid. You have their findings. This ends the discussion on the local level. I will now read a document, an official copy of which will be given to you for transmission to your own government."

His voice steady, Hardwick pulled the papers from his tunic pocket and began to read:

"I, as President of the United States of America, in accordance with the powers vested in me by Congress, and in defense of not only the national security of the United States but the security of the entire human race, make upon the Government of the Chinese People's Republic the following requirements, to be listed here below by number. Any failure to abide by any and all of these requirements will be met by the seeding of the entire Chinese People's Republic with the serum of the Deathchild. Every plane, every missile and every means of utilization known to man, will be employed to this end. Three weeks will be granted from

the date of exchange of personnel, and no more will be allowed for an affirmative answer.

"The method of negotiation initiated by the United States, by which the Chief Justice of the United States Supreme Court and the Secretary of Defense passed into custody of the Peoples Republic of China in exchange for the high dignitaries and scientists of that nation who will inspect the Deathchild and his facilities has, by the time of the reading of this document, been fulfilled in part. It now remains for the re-exchange to be completed and for the transmission to and the consideration by the Peoples Republic of China of these proposals.

"The Requirements are herewith listed:

"1) That all armed forces of the Peoples Republic of China immediately withdraw all equipment and personnel to within the borders of that country.

"2) That a delegation will be sent at once to negotiate for a mutual and joint permanent exchange of arms control and nuclear power control personnel between the United States and the Peoples Republic of China.

"3) That the Peoples Republic of China at once apply for admission to the United Nations.

"4) That

VIII

Two weeks had come and gone when Hardwick emerged from his daily visit to the guarded communications center. It was four o'clock in the afternoon by his watch,

and a feeling of futility and depression rode him like the black dog his Irish grandmother used to talk about.

There was still no answer to Washington from Peking, and time was running out. In only another five days he would have to give orders to start loading the sealed cases which were Joseph's gift to his fellow humans. The helicopters would come to the hidden field far above, and the cargo of death would depart, to begin its journey to the far-scattered launching sites, airfields and submarine pens.

And what would happen then, he thought? If his deepest and almost unconscious suspicions were correct, what would happen then?

He strolled along the corridors toward his quarters, nodding absently to the guards as he passed them. He had nearly reached his room when he saw Joanne passing ahead of him at a cross corridor.

Without even thinking, he called out to her, and she waited until he had caught up.

Hardwick had not seen much of his female counterpart since the departure of the Chinese delegation. She had totally withdrawn, staying in her quarters and having most of her meals sent in. The only time she had come out was for work, the continual and never-ceasing tests and inspections of the baby's byproducts and serology. Otherwise, she had simply stayed away from everyone, even from Tom Allen, who was her closest friend in the installation.

Now, under the unvarying glow of the fluorescents, she waited almost

passively as he approached. Her face, he saw with an inner wrench, was white and drawn, the skin taut over her high cheekbones, the eyes smudged and blurred looking, without expression.

"Hey, lady, where you been?" he asked in a gruff voice. He took her by the arm, and she followed as if without a will of her own. Inwardly, he cursed the world and its problems which had brought the two of them together under this man-killing strain and these cave-dwelling conditions.

"I prescribe a stiff belt in my quarters," he said, trying to keep his voice casual. "You don't mind not being chaperoned, I hope?"

Her only answer was a wan smile, but she made no resistance and allowed him almost to lead her to his room. It was as if the unending responsibility had finally drained away all her will power and left a semi-robot, capable only of routine tasks.

He had barely seated her in the room's only chair and started to open his little wall refrigerator when his private phone burred, the green light indicating a closed line. He put down the ice cubes and picked it up, wondering what now.

"Okay, pal," said Tom Allen. "I was just in the comm room. They gave in. A little haggling, but they gave in. A few of our reports have picked up the start of a pullout from Burma already. Congratulations! Say so to your friend as well. Good luck." There was a click, and the line was dead.

Hardwick put the phone down slowly, wondering, as he had in the past, where Allen got some of his information. How had he known Joanne was there? And why "Good luck"? Maybe ESP was his secret.

He looked at her, staring at the wall, her face dead and gone to outside concerns, and felt a violent need to bring her back to life on a crash basis.

She sipped the drink he gave her but still said nothing, like a child doing what an adult has ordered, dutifully but uncomprehendingly.

"Joanne," he said softly, standing over her. "Look at me. We've won. That was Tom on the phone. The Chinese are coming to terms. It worked. We're really going to have peace for a while."

She looked up slowly and blinked. Then her tired eyes filled with tears. She put the glass on the floor and buried her face in her hands, sobbing uncontrollably. Hardwick stood over her, his own face working, and wondered, like a normal male idiot, what to do.

She solved the problem for him by rising and coming into his arms so quickly that some of his highball sloshed over her back. Neither of them paid it any attention.

It was half an hour before any sense returned to the room, and by this time they were both in the chair.

Joanne was curled up in his lap, her arms still around his neck, her hair in total disorder, an expression of bliss on her face, which seemed to have lost years of age in mere moments.

Cursing himself for what he had to do, Hardwick rose, lifted her and laid her gently on the bed. Then he stood away from her, looking down, his hands behind his back.

"Honey," he said, "we have to settle something right now. I've lived with a crazy idea for a long time, and the crazier it got, the more sense it made. I have to know the answer."

The smile slipped from her face; she lay back on the pillow and stared at him.

"Whose child is Joseph?" asked Hardwick quietly. "And aside from not being toilet-trained, what else prevents him from adorning a living room rug in any normal home?"

To his amazement, after a quick catch of breath, a very faint smile appeared at the corner of her mouth. She stretched and locked her arms behind her head in relaxation.

"He's mine, Al. Had you got that far?"

Hardwick exhaled a gust of air and sat down suddenly in the vacated chair.

"And there's nothing wrong with him at all is there?"

"Not a thing, dear."

"Who else knows?" asked Hardwick. He got up and made himself a new drink, feeling curiously light-headed.

"Make me another one too, will you? No one knows the whole story but the President, Tom Allen, me — and now you. It had to be that way. I'll have to report you, of course, unless you'd rather do it yourself."

"Who's the father?" Hardwick asked thickly. He was not looking at her and had faced the other way.

"A man who had supplied the sperm bank of a small hospital in Billings, Montana," came the unruffled reply from behind him. "He was medically fit and a citizen. That's all I know, except that Tom destroyed all his hospital records, whoever he was."

"I checked on a few things while going over the personnel record files, Joanne," he said, at length. "You have a small birthmark on your left calf. It didn't register until I noticed that Joseph does too. These things frequently are hereditary. My father and brother had identical ones. No proof, but it got me to thinking. It seemed absurd, of course. It meant everything had to be a fraud, from beginning to end. Then I thought of the code name of this operation which, by the way, the Chinese never heard. "Inside Straight"! Who thought that up, I wondered? A desperate and unlikely gamble, using a sucker's attempt to fill a bad hand. A bad, almost hopeless hand, one intrinsically worth nothing! I'm no psychologist, but that struck me as odd. Who could believe the United States, with life or death, at stake would gamble on nothing, a dud poker hand? But if it filled, as it just has, then it's a *real* hand! The most colossal gamble in human history!"

He drank and turned to face her. "Who thought it up?"

"Tom Allen and I. His wife, Lee, is — was my sister. Do you want me to tell you the whole story, in order?" Her placidity was once again restored, as it had been when they first met.

"You know very well that I do."

"All right, here's what happened."

Joanne and Allen had seen a lot of each other in Washington after the death of Allen's wife. They had often played complicated games for amusement, including one they had invented, which they called *Super-spy*. In this game, each one had to present the other, who represented a major power, with a *fait accompli*, a means meticulously worked out, by which his or her country was absolutely compelled to surrender. The opponent, faced with this overwhelming menace, had to somehow frustrate or nullify it. From this game came the concept of the Deathchild, the lethal mutant in reverse, the one weapon to end them all. But something was missing, the actual convincer, the gimmick which *really* caused death.

Then, exactly at the right time, a report had crossed Allen's desk, coming directly from a field agent who operated in the Virgin Islands. No one else in Washington had seen it before Allen. It told how a young biochemist in a small, marine laboratory, working with animal proteins and alkaloids derived from corals and other forms of sea life, had discovered and isolated a terrible poison. So awful did he feel this substance to be, he had actually contacted the C.I.A. directly, not even informing his superiors at the research station where he worked.

Allen had called Joanne at once and simultaneously sent a pickup order for the man and his family.

"Where are they now?" interrupted Hardwick.

"On our Ascension Island base, under total security wraps. He had always wanted to write, and now he has the best private library in his field. He and his wife volunteered, without knowing why. One ~~more~~ group of unsung heroes, but his job is a lot easier than most."

Allen had had the authority to go, and did go, straight to the White House. Approval came after a week, and meanwhile six C.I.A. chemists had died testing the poison, which acted in many ways much like the nerve gases, only in far smaller quantities. Further, like a number of proteins, it left absolutely no trace. The original discoverer had simply not refined it sufficiently and thus had lived.

Joanne had then become pregnant under a false identity. They had felt this was the only way to insure complete security, and it had been Allen's suggestion. She had asked him to be the father, and he had refused, feeling it would make her task unbearable. The whole matter from then on had been so falsified that no one concerned had known anything but inconsequential bits of the total story.

Next had come the selection of the hospital. Houston General was fairly old and a new one was badly needed. The pictures of the dead and other evidence were fakes, all concerned being of C.I.A. agents, none of whom were later associated with the project. The staff of the hospital was a harder problem, but not insoluble. Mostly they had been carefully dispersed, with only a final hard core remaining, who were put under

National Security Oath. None of them were in the hospital on the day of Joseph's supposed birth. The dead firemen and patients, the heroic doctors and nurses who gave their lives, were all agents, and all were pulled off the project immediately after and reassigned as far away as possible.

At each level, a new team was introduced and an old one scattered to the winds. A few of the more pertinacious inquiries were dealt with by top level interviews, and the blanket of National Security was invoked.

Only Allen and Joanne were in it all the way. Not even the Cabinet knew the real story, nor did the Intelligence department heads. The Secretary of Defense and the Chief Justice didn't even know the details of the cover story, a fact they were well aware of, and indeed had been instructed to tell the Chinese:

The plant installation had certainly been built with every precaution, just as if the whole thing were true. To everyone who thought he knew the actual truth, save for the President, Joanne and Allen, the precautions, guards and secrecy were vital.

"I can understand that," said Hardwick. "If it wasn't believable to the last ounce, the whole atmosphere was gone. But I don't see how the stuff got moved around. Does it really kill in the atmosphere in those minute quantities?"

"Al, G-gas practically does too, and that's been around since the Second World War. But *Josephine*, which is what Tom and I call the poison, dissipates almost at once. There are *no* traces any test can de-

tect. It seems to be a close cousin of *Ciguatera*, the tropical poison that kills people after they eat certain marine fish. They may even be two aspects of the same thing."

The chemical fiddling was very tricky, she went on, but not impossible. Every technical loophole they could think of had been blocked a month before Hardwick had arrived. In a way, he was the last test. Allen had a high belief in Hardwick's intelligence and had argued that if he could be fooled, anyone could. Hardwick felt professionally pleased at the tribute, but was still puzzled.

"Couldn't any of your science people have realized that vents and hidden ducts and secret pipes in the filters were feeding this stuff *in* and that none of it came from the baby?"

"They could, but only if the idea were given them first. The place was built to be *believed*. Workmen who had no idea of what they were doing installed all those hidden bits and pieces on the orders of engineers who had no idea why they were wanted. Then they all left. Then and only then, don't you see, did the science staff come and get the full treatment. Why shouldn't they believe it?"

"Yes, I see," said Hardwick. "The belief just grew and grew, until it spread to every new person like a miasma. And I suppose you and Tom checked the mysterious machinery and the poison apparatus yourselves?"

This was correct, she said. Allen was, among other things, a trained electrical engineer, and she was a competent chemist as well as a psychologist. The two could not have built the apparatus originally, but it

was no trouble to monitor and maintain it, once installed. Any heavy or serious checking was always done during a mock evacuation or fire drill of the particular area needed.

There was a long silence while Hardwick simply sat and stared at the floor, hands clasped between his knees.

Eventually he looked up and met her sympathetic gaze.

"What now, Joanne? It worked. Sounds banal, but you seem to have saved the world. But what about Joseph? Who saves him? And what happens to this place? I've never had a chance to think about that aspect before, but you and Tom must have." He sighed. "What happens now? And what about your child, your little boy?"

She got off the bed, came over and knelt at his side.

"We stay here, dear. Joseph stays, and we stay. He's my son, and I love him desperately, fatherless, alone and thinking that a filthy robot, padded with cloth, is his mother. But he

stays. Tom stays. We all stay. The play goes on.

"We can't let up. You can see that, if you think a minute. In five or ten years, peace may be secure enough for us to come out and change our names. Maybe it will. I don't know.

"But meanwhile, the Deathchild has to stay. He had to be believed in, hidden, guarded, cared for. Tom says the enemy will never, never stop looking for him. We may have to move, may have to rebuild this whole place somewhere else. So everyone has to believe in it, totally, religiously, especially our staff. They're giving their lives and devotion to an idea. The idea has to stay valid. It may be trite," she ended, "but we have each other now. That helps."

It helped, Hardwick guessed, as he sat looking down at her, but somehow all he saw in his mind was a round-faced baby, who might have been his son. It was silly, in the face of world peace, to quibble about one atom of mortality, but he wondered if he would ever be able to hold Joseph in his arms. **END**

This Month in Galaxy

THE VILLAINS FROM VEGA IV

by H. L. Gold and E. J. Gold

BEHIND THE SANDRAT HOAX

by Christopher Anvil

CRIMINAL IN UTOPIA

by Mack Reynolds

October Galaxy on sale now — get your copy today!

PADDLEWHEEL ON THE STYX

by LOHR MILLER

*On the hottest planet of all, they
rode its molten streams of metal
in a nuclear-powered riverboat!*

The Styx, the Acheron, the Phlegthon. These are the rivers of Mercury. The Cocytus, the Lethe, the Mare Infernum. These are the seas of Mercury. They are the waters of Hell.

The *Charon* is the sole sailor of the seas of Hell. Gaunt, scorched dull black, its paddlewheels propel it through the Beardsley-drawn shadow world of the Sunside, a stranger to the sea.

Cerberus, the watchdog of Hell, spotted it as it fell, an Icarus blazing in the sky. The sensors on Cerberus screamed their warning to the reflector-plated dome of Dis. Gauntlets of oyster-white plastex coated

with frost trained the detectors of Dis on it. The commander of Dis read the reports and looked at his screens in fear.

The Phoebus-K engines that bore it left a trail of hydrogen derivatives glowing in the sky as the *Copa de Oro* dived on the Sunside. Rhadamanthus, the judge of Hell, beamed autocontrol signals into the radiation-scared sky as the unresponsive ship fell. The *Copa de Oro* streaked down, gaining speed.

In Dis, the computers made noises like pneumatic hammers and put an answer on their screens. ESTIMATED POINT OF IMPACT 24° 25' N., 176° 22' E.

The commander of Dis nodded to his subordinates, who checked their maps. The *Copa de Oro* would come down at Point Dante, two hundred miles south of Dis.

The *Copa de Oro* was worth everything that could be done to salvage her gaunt silver shape. She made up one-third of Earth's nuclear space fleet. She was priceless.

Don Manuel Stilette Dos Muertos, the boatman of the infernal regions, donned his white suit with a row of chill-coils nesting like snakes in the back. He ran up the stairs through Dis to the docks.

The paddlewheels clawed at the softly glowing sea. They cut through and came up, tiny viscous clumps of lava dripping from the blades. In the dark of the buildings they resembled tiny sunsets as they fell into the sea. Dos Muertos swung the *Charon* south to the land where the stilettos of the sun knifed and gouged and bounced into the seas of flowing rock and lead and tin.

Dos Muertos sat in his big command chair aboard the *Charon* and looked at the frost that covered his controls. Two nozzles in the ceiling sprayed coolant down onto the cabin. To look at Dos Muertos through his visor of #7 amber revealed a pale, patrician face. Dos Muertos had an air about him that was just barely placable.

Dos Muertos was a matador. The

an IF First

Each month *IF* presents a new writer, never before published, and his science-fiction story. This month's "First" is Lohr Miller, a Baton Rouge high-school student whose special interests are Napoleonic history, astronomy, weaponry — and science fiction. Miller is almost certainly the youngest contributor to science-fiction magazines (he will be 14 in November), beating out *IF*'s previous "First" record-holder, Bruce McAllister (14½ when his first story was published), by a full year and coming close to the record set by young master (now Dr.) Kenneth Sterling several decades ago. Anybody know of a younger one?

last great matador. But his *fiesta brava* was not in the Plaza del **Toros** in Madrid, facing bulls, but on Mercury, facing the weapons of the sun. That was Dos Muertos: a matador. An enemy to the sun.

Rudders turned. Jets of compressed oxygen spurted from tanks in the hull. The *Charon* surged forward and southward. The winglike sides of the ship cut through the glowing waves and stood out in the red mists that belched from the craters that lined the shore. The *Charon* rode south.

Point Dante was a jut of rock with four crown-rimmed craters on it that spewed lava. Atop the rim of one crater the *Copa de Oro* balanced. The *Charon* cut through a wave of lava borne aloft by tectonic activity and came within scope

range of Point Dante. Dos Muertos brought down his periscope and swept the area.

The *Copa de Oro* was a great tri-tailed thing, and her nose was in position for a quick line from the *Charon*. So the matador moved in, the *Charon* his cape, swordless.

Percolating in the crater, the lava bubbled up, and a wave cascaded down onto the port flank of the *Copa de Oro*. The metal had already peeled, and lava whooshed through and into the innards of the Number Two Phoebus-K. The Phoebus's nozzle flared out and vomited metal and flame.

Dos Muertos watched, transfixed.

Number Three ignited and split at the seams. Metal fell away and hit the sea. Bubbles of lava appeared. Hydrogen derivatives spurted from exposed tanks and left a trail on the crater's rim.

Number Two ignited and functioned properly. Its thrust shoved the *Copa* from her position atop the crater into the sea. The rounded nose of the ship entered the sea a few yards in front of the *Charon*.

That was the charge of the sun/

bull. Dos Muertos's veronica was quick and life-saving. He reversed the paddles and fired the forward jets as the waves the *Copa's* fall had raised washed over the *Charon's* bow. Dos Muertos looked into his periscope. Lava was dripping over the lens, giving a very odd view as it thinned into transparency. He checked his controls. Aside from a twelve-degree list the *Charon* was functioning as well as could be expected.

The *Charon* limped away. Dos Muertos was silent. He only looked at his upper screens of #7 relux and felt hate. He knew who the enemy was. The sun was his enemy. He couldn't defeat the sun, for only time was capable of that, but he could harass it and worry it. Any victory at all was a major one; every Brienne was an Austerlitz, for the sun was an enemy to hate with all the hate Dos Muertos could dredge from his soul.

The *Charon* carried him away to Dis, where the sun could penetrate to lash with radiation and heat to destroy the matador, a stranger to the sea. END

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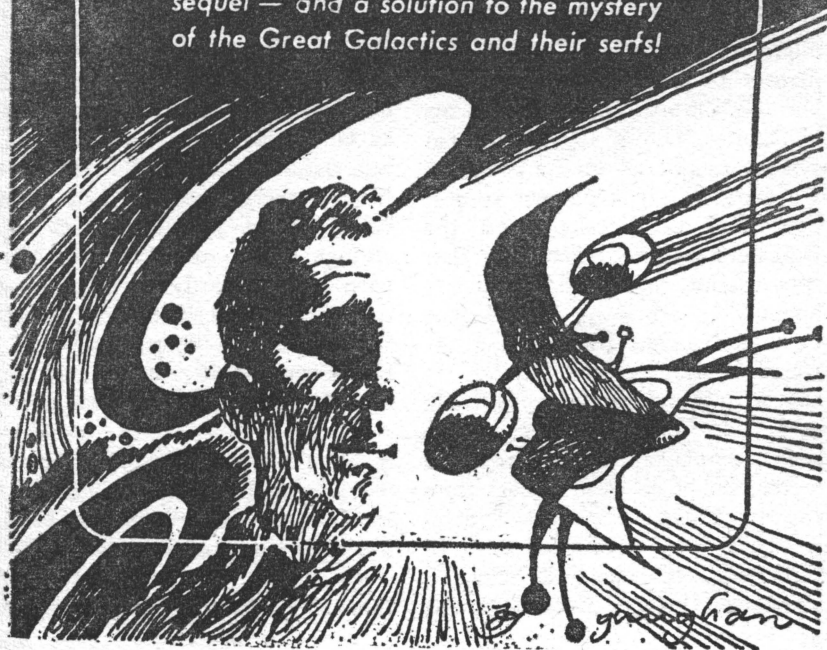
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Vol. 1, No. 1 on sale SOON! Don't miss it! Newsstand Only

THE PROXY INTELLIGENCE

A. E. VAN VOGT

Remember Van Vogt's classic novel, Asylum? Here's the long-awaited sequel — and a solution to the mystery of the Great Galactics and their serfs!



Take a sentient being —

Even Steve Hanardy could fit that description. He was a short, stocky man, with the look about him of someone who had lived too close to the animal stage. His eyes were perpetually narrowed, as if he were peering against a bright light. His face was broad and fleshy. But he was human. He could think and act, and he was a giver and not a taker.

— Put this sentient person in a solar system surrounded by a two billion light-year ocean of virtual nothingness beyond which, apparently, is more nothingness —

Hanardy, a product of Earth's migration to the moon and to the planets of the solar system, was born on Europa, one of the moons of Jupiter, before the educational system caught up to the colonists. He grew up an incoherent roustabout and a spacehand on the freighters and passenger liners that sped about among the immense amount of debris — from moons to habitable meteorites — that surrounded the massive Jupiter. It was a rich and ever-growing trade area, and so presently even the stolid, unimaginative Hanardy had a freighter of his own. Almost from the beginning, his most fruitful journeys were occasional trips to the meteorite where a scientist, Professor Ungarn, lived with his

daughter, Patricia. For years, it was a lucrative, routine voyage, without incident.

— Confront this sentient individual with this enigma of being —

The last voyage had been different.

To begin with, he accepted a passenger — a reporter named William Leigh, who ostensibly wanted to write up the lonely route for his news syndicate. But almost as soon as the freighter reached the Ungarn meteorite and entered the airlock, the meteorite was attacked by strange space vessels, which were capable of far greater speeds than anything Hanardy had ever seen. And William Leigh was not who he seemed.

It was hard to know just who he was. What actually happened as far as Hanardy was concerned, was quite simple: One of the defensive energy screens had gone down before the attack of the strange ships; and Professor Ungarn sent Hanardy to machine a new part for the screen's drive unit. While he was engaged in this, Leigh came upon him by surprise, attacked him, and tied him up.

Lying there on the floor, bound hand and foot, Hanardy thought in anguish: "If I ever get loose, I'm gonna hightail it out of here!"

He tested the rope that held him and groaned at its unyielding

toughness. He lay, then, for a while, accepting the confinement of the bonds, but underneath was a great grief and a great fear.

He suspected that Professor Ungarn and the professor's daughter, Patricia, were equally helpless, or they would have tried during the past hour to find out what had happened to him.

He listened again, intently, holding himself still. But only the steady throbbing of the distant dynamos was audible. No footsteps approached; there was no other movement.

He was still listening when he felt an odd tugging inside his body.

Shivering a little, Hanardy shook his head as if to clear it of mental fog — and climbed to his feet.

He didn't notice that the cords that had bound him fell away.

Out in the corridor, he paused tensely. The place looked deserted, empty. Except for the vague vibration from the dynamos, a great silence pressed in upon him. The place had the look and feel of being on a planet. The artificial gravity made him somewhat lighter than on Earth, but he was used to such changes. It was hard to grasp that he was inside a meteorite, hundreds of thousands of miles from the nearest moon or inhabited planet. Being here was like being inside a big building, on an upper floor.

Hanardy headed for the nearest elevator shaft. He thought: I'd better untie Miss Pat, then her pop, and then get.

It was an automatic decision, to go to the girl first. Despite her sharp tongue, he admired her. He had seen her use weapons to injure, but that didn't change his feeling. He guessed that she'd be very angry — very possibly she'd blame him for the whole mess.

Presently he was knocking hesitantly on the door to Patricia's apartment. Hesitantly, because he was certain that she was not in a position to answer.

When, after a reasonable pause, there was no reply, he pressed gently on the latch. The door swung open.

He entered pure enchantment.

The apartment was a physical delight. There were French-type windows that opened onto a sunlit window. The French doors were open, and the sound of birds singing wafted in through them. There were other doors leading to the inner world of the girl's home, and Hanardy, who had occasionally been in the other rooms to do minor repair work, knew that there also everything was as costly as it was here in this large room that he could see.

Then he saw the girl. She was lying on the floor, half-hidden behind her favorite chair, and she

was bound hand and foot with wire.

Hanardy walked toward her unhappily. It was he who had brought William Leigh, and he wasn't quite sure just how he would argue himself out of any accusation she might make about that. His guilt showed in the way he held his thick-set body, in the shuffling of his legs, in the awkward way he knelt beside her. He began gingerly to deal with the thin wire that enlaced and interlaced her limbs.

The girl was patient. She waited till he had taken all the wire off her and then, without moving from the floor, began to rub the circulation back into her wrists and ankles.

She looked up at him and made her first comment: "How did you avoid being tied up?"

"I didn't. He got me, too," said Hanardy. He spoke eagerly, anxious to be one of the injured, along with her. He already felt better. She didn't seem to be angry.

"Then how did you get free?" Patricia Ungarn asked.

"Why, I just — " Hanardy began.

He stopped, thunderstruck. He thought back, then over what had happened. He had been lying there, tied. And then . . . and then . . .

What?

He stood blank, scarcely daring to think. Realizing that an answer was expected, he began apologetically, "I guess he didn't tie me up

so good, and I was in a kind of a hurry, figuring you were here, and so I just — "

Even as he spoke, his whole being rocked with the remembrance of how tough those ropes had been a few minutes before he freed himself.

He stopped his mumbling explanation because the girl wasn't listening, wasn't even looking. She had climbed to her feet, and she was continuing to rub her hands. She was small of build and good-looking in a bitter way. Her lips were pressed too tightly together; her eyes were slightly narrowed with a kind of permanent anxiety. Except for that, she looked like a girl in her teens, but cleverer and more sophisticated than most girls her age.

Even as Hanardy, in his heavy way, was aware of the complexity of her, she faced him again. She said with an un-girl-like decisiveness, "Tell me everything that happened to you."

Hanardy was glad to let go of the unsatisfactory recollection of his own escape. He said, "First thing I know, this guy comes in there while I'm working at the lathe. And is he strong, and is he fast! I never would've thought he had that kind of muscle and that fast way of moving. I'm pretty chunky, y'understand — "

"What then?" She was patient,

but there was a pointedness about her question that channeled his attention back to the main line of events.

"Then he ties me up, and then he goes out, and then he takes those Dreeghs from the spaceship and disappears into space." Hanardy shook his head, wonderingly. "That's what gets me. How did he do that?"

He paused, in a brown study; but he came from the distance of his thought back into the room, to realize guiltily that the girl had spoken to him twice.

"Sorry," he muttered. "I was thinking about how he did that, and it's kind of hard to get the idea." He finished, almost accusingly: "Do you know what he does?"

The girl looked at him, a startled expression on her face. Hanardy thought she was angry at his inattention and said hastily: "I didn't hear what you wanted me to do. Tell me again, huh!"

She seemed unaware that he had spoken. "What *does* he do, Steve?"

"Why, he just —"

At that point, Hanardy stopped short and glanced back mentally over the glib words he had been using. It was such a fantastic dialogue, that he could feel the blood draining from his cheeks.

"Huh!" he said.

"What does he do, Steve?" He saw that she was looking at him, as

if she understood something that he didn't. It irritated him.

He said unhappily: "I'd better go and untie your father before that last bunch of Dreeghs shows up."

Having spoken, he stopped again, his mouth open in amazement. He thought: "I must be nuts. What am I saying?"

He turned and started for the door.

"Come back here!"

Her voice, sharp and commanding, cut into him. Defensively, he put up between himself and her the thick barrier of stolidity which had served him for so many years in his relations with other people. He swung awkwardly around to face her again. Before he could speak, she said with intensity: "How did he do it, Steve?"

The question ran up against a great stubbornness in him. He had no feeling of deliberately resisting her. But the mental fog seemed to settle down upon his being, and he said: "Do what, Miss?"

"Leave?"

"Who?" He felt stupid before her questions, but he felt even more stupid for having had meaningless thoughts and said meaningless things.

"Leigh — you fool! That's who."

"I thought he took that space-boat of yours that looks like an automobile."

There was a long pause. The girl clenched and unclenched her hands. Now she seemed very unchildlike indeed. Hanardy, who had seen her angry before, cringed and waited for the thunder and lightning of her rage to lash out at him. Instead, the tenseness faded. She seemed suddenly thoughtful and said with unexpected gentleness: "After that, Steve? After he got out there!"

She swung her arm and pointed at the aviary, where the sunlight glinted beyond the French windows. Hanardy saw birds fluttering among the trees. Their musical cries gave the scene a homey touch, as if it really were a garden. As he watched, the tree leaves stirred; and he knew that hidden fans were blowing an artificial breeze. It was like a summer afternoon, except that just beyond the glasslike wall was the blackness of space.

It was a cosmic night outside, disturbed here and there by an atom of matter — a planet hidden from sight by its own relative smallness and distance from anything else; a sun, a point of light and energy, quickly lost in darkness so vast that presently its light would fade, and become one grain in a misty bright cloud that obscured the blackness for a moment of universe time and occupied an inch of space, or so it seemed. . . .

Hanardy contemplated that startling vista. He was only vaguely

aware that his present intensity of interest was quite different from similar thoughts he had had in the past. On his long journeys, such ideas had slipped into and out of his mind. He recalled having had a thought about it just a few months before. He had been looking out of a porthole, and — just for an instant — the mystery of the empty immensity had touched him. And he'd thought: "What the heck is behind all this? How does a guy like me rate being alive?"

Aloud, Hanardy muttered: "I'd better get your father free, Miss Pat." He finished under his breath: "And then beat it out of here — fast."

II

He turned, and this time, though she called after him angrily, he stumbled out into the corridor and went down to the depths of the meteorite, where the dynamos hummed and throbbed; and where, presently, he had Professor Ungarn untied.

The older man was quite cheerful. "Well, Steve, we're not dead yet. I don't know why they didn't jump in on us, but the screens are still holding, I see."

He was a gaunt man with deep-set eyes and the unhappiest face Hanardy have ever seen. He stood, rubbing the circulation back into his arms. Strength of intellect shone

from his face, along with the melancholy. He had defended the meteorite in such a calm, practical way from the attacking Dreeghs that it was suddenly easy to realize that this sad-faced man was actually the hitherto unsuspected observer of the solar system for a vast galactic culture, which included at its top echelon the Great Galactic — who had been William Leigh — and at the bottom, Professor Ungard and his lovely daughter.

The thoughts about that seeped into Hanardy's fore-conscious. He realized that the scientist was primarily a protector. He and this station were here to prevent contact between Earth and the galaxy. Man and his earth-born civilization were still too low on the scale of development to be admitted to awareness that a gigantic galactic culture existed. Interstellar ships of other low-echelon cultures which had been admitted to the galactic union were warned away from the solar system whenever they came too close. Accidentally, the hunted, lawless Dreeghs had wandered into this forbidden sector of space. In their lust for blood and life energy they had avidly concentrated here in the hope of gaining such a quantity of blood, and so great a supply of life energy, that they would be freed for endless years from their terrible search.

It had been quite a trap, which had enabled the Great Galactic to capture so many of them. But now another shipload of Dreeghs was due; and this time there was no trap.

Professor Ungarn was speaking: "Did you get that part machined before Leigh tied you up?" He broke off: "What's the matter, Steve?"

"Huh! Nothing." Hanardy came out of a depth of wonderment: "I'd better get onto that job. It'll take a half hour, maybe."

Professor Ungarn nodded and said matter-of-factly: "I'll feel better when we get that additional screen up. There's quite a gang out there."

Hanardy parted his lips to say that that particular "gang" was no longer a problem, but that another super-ship, a late arrival, would shortly appear on the scene. He stopped the words, unspoken; and now he was consciously dismayed. "What's going on?" he wondered. "Am I nuts?"

Almost blank, he headed down to the machine shop. As he entered, he saw the ropes that had bound him, lying on the floor. He walked over in a haze of interest and stooped to pick up one of the short sections.

It came apart in his fingers, breaking into a fine, powdery stuff, some of which drifted into his nostrils. He sneezed noisily.

The ropē, he discovered, was all like that. He could hardly get over it. He kept picking up the pieces, just so that he could feel them crumble. When he had nothing but a scattering of dust, he stood up and started on the lathe job. He thought absently: "If that next batch of Dreeghs arrives, then maybe I can start believing all this stuff."

He paused and for the first time thought: "Now, where did I get that name, Dreegh?"

Instantly, he was trembling so violently that he had to stop work. Because — if he could get the professor to admit that that was what they were — *Dreeghs* — then. . .

Then what?

"Why, it'd prove everything," he thought. "Just that one thing!"

Already, the crumbled rope, and whatever it proved, was fading into the background of his recollection, no longer quite real, needing to be reinforced by some new miracle. As it happened, he asked the question under optimum circumstances. He handed the part to the scientist and managed to ask about the Dreeghs as the older man was turning away. Ungarn began immediately with an obvious urgency to work on the shattered section of the energy screen drive. It was from there, intent on what he was doing, and in an absent-minded tone, that he answered Hanardy's question.

"Yes, yes," he muttered. "Dreeghs. Vampires, in the worst sense of the word . . . but they look just like us."

At that point he seemed to realize to whom he was talking. He stopped what he was doing and swung around and stared at Hanardy.

He said at last very slowly, "Steve, don't repeat everything you hear around this place. The universe is a bigger territory than you might think but people will ridicule if you try to tell them. They will say you're crazy.

Hanardy did not move. He was thinking: "He just don't realize. I gotta know. All this stuff happening — "

But the idea of not telling was easy to grasp. At Spaceport, on the moon, Europa, at the bars that he frequented, he was accepted by certain hangers-on as a boon companion. Some of the people were sharp, even educated, but they were cynical, and often witty, and were particularly scathing of serious ideas.

Hanardy visualized himself telling any one of them that there was more to space than the solar system — more life, more intelligence — and he could imagine the ridiculing discussion that would begin.

Though they usually treated him with tolerance — it sure wouldn't do any good to tell them.

Hanardy started for the door. "I gotta know," he thought again. "And right now I'd better get on my ship and beat it before that Dreegh comes along pretending that he's Pat's future husband."

And he'd better leave on the sly. The professor and the girl wouldn't like him to go away now. But defending this meteorite was their job, not his. They couldn't expect him to deal with the Dreegh who had captured, and murdered, Pat's boy friend.

Hanardy stopped in the doorway, and felt blank. "Huh!" he said aloud.

He thought: Maybe I should tell them. They won't be able to deal with the Dreegh if they think he's somebody else.

"Steve!" It was Professor Ungarn.

Hanardy turned. "Yeah, boss?" he began.

"Finish unloading your cargo."

"Okay, boss."

He walked off heavily along the corridor, tired and glad that he had been told to go and relieved that the decision to tell them could not be put into effect immediately. He thought wearily: First thing I'd better do is take a nap.

III

Hanardy walked slowly up the ramp into his own ship, and

so to his own cabin. Before lying down for the sleep he needed, he paused to stare at his reflection in the mirror-bright metal wall of the room. He saw a short, muscular man in greasy, gray dungarees, and a dirty yellow shirt. A stubble of beard emphasized a coarseness of features that he had seen before, but somehow never so clearly, never with such a conviction that he was a low-grade human being. Hanardy groaned and stretched out in the bunk. He thought: I sure got my eyes open all of a sudden to what kind of a lug I am.

He took a quick look back along the track of years, and groaned again. It was a picture of a man who had down-graded himself as a human being, seeking escape in a lonely space job from the need to compete as an individual.

"Nobody will believe a word I say," he thought. "All that other junk was only in my noodle — it didn't happen out where you could prove anything. I'd better just keep my mouth shut and stop thinking I understand what's going on."

He closed his eyes — and looked with a clear inner vision at the universe.

He opened his eyes to realize that he had slept.

He realized something else. The screens were down; a Deegh in a spaceboat was coming into an airlock at the extreme lower side of the meteorite.

The vampire was primarily intent on information, but he would destroy everyone in the meteorite as soon as he felt it was safe.

Sweating Hanardy tumbled out of the bunk and hurried out of his ship, and so into the meteorite. He raced along the corridor that led to the other airlock. At the entrance he met the professor and Patricia. They were smiling and excited.

The scientist said, "Great news, Steve. Pat's fiancé has just arrived. He's here sooner than we expected; but we were getting worried that we hadn't received some communication."

Hanardy muttered something, feeling immensely foolish. To have been so wrong! To have thought: Dreegh! — when the reality was— Klugg . . . the girl's long-awaited fiancé, Thadled Madro.

But the identification of the new arrival made all his fantasies just that — unreal vaporings, figments of an unsettled mind.

Hanardy watched gloomily as Madro came down the ramp from the lifeboat. The girl's lover was a very tall, slim man in his thirties, with deep-set eyes. He had an intensity about him that was impressive, commanding — and repellent. Instantly repellent.

Hanardy realized ruefully that his reaction was over-critical. Hanardy couldn't decide what had twisted this man. But he was re-

minded of the degraded people who were his principal buddies at spaceport, on Europa. Smart, many of them were — almost too smart. But they gave off this same emanation of an overloaded personality.

Hanardy was a little surprised to realize that the girl was not rushing forward to greet the gaunt-bodied visitor. It was Professor Ungarn, who approached the man and bowed courteously. Madro bowed in return and then stood looking at the girl who waited stiffly near Hanardy. The scientist glanced at his daughter and then smiled at the newcomer apologetically. He said, Thadled Madro, this is my daughter, Patricia — who has suddenly become very shy."

Madro bowed. Patricia inclined her head. Her father turned to her, and said, "My dear, I realize that this is an unfortunate way of marrying and giving in marriage — to entrust yourself to a man whom neither of us has ever seen before. But let us remember his courage in coming here at all and resolve to offer him communication and the opportunity to show us what he is."

Madro bowed to the girl. "On those terms, I greet you, Patricia." He straightened. "About communication — I am baffled by the message I received *en route*. Will you please give me further information?"

Professor Ungarn told him of the Dreegh attack and of its abrupt cessation; he told him of William Leigh, the Great Galactic. He finished: "We have our report as to what happened from a member of the race of this system — who was somehow infected by the mere presence of this mighty being, and who apparently acquired the ability to see at a distance, and to be aware of some of the thoughts of some people, temporarily at least."

There was a faint smile on Ungarn's tired face. Hanardy shriveled a little inside, feeling that he was being made fun of. He looked unhappily at the girl. She must have told her father what he had said.

Patricia Ungarn caught his gaze on her and shrugged. "You said it, Steve," she stated matter-of-factly. "Why not tell us everything you felt?"

The newcomer stared somberly and intently at Hanardy; so intently that it was almost as if he also were reading minds. He turned slowly to the girl. "Can you give me a swift summary?" he asked. "If there's action to be taken, I'd like to have some basis for it."

There was a hard note in his voice that chilled Hanardy, who had been thinking for many minutes over and over: *They don't really know him! They don't know him.* . . . He had a mental picture

of the real Madro's ship being intercepted, Madro captured and drained of information and then murdered by the vampire method. The rest was skillful makeup, good enough apparently to pass the inspection of the professor and his perceptive daughter. Which meant that, before killing the real Madro, the Dreegh had learned passwords, secret codes and enough back history to be convincing.

Within minutes, this creature could decide that it was safe to take action.

Hanardy had no illusions, no hope. It had taken an unbounded being to defeat these mighty Dreeghs. And now, by a trick, a late arrival had achieved what his fellows *en masse* had not been able to do — he had gotten into the meteorite fortress of the galactic watcher of the solar system; and his whole manner indicated that his fears had nothing to do with either the professor or his daughter, or Hanardy.

He wanted to know what had happened. For a little while he might be forbearing, in the belief that he could learn more as an apparent ally than as a revealed enemy.

"We have to put him off," Hanardy thought in agony. "We have to hold back, or maybe give him what he wants." Somehow, the latter seemed preferable.

He grew aware that the girl was talking. While Hanardy listened, she gave the essential picture of what he had said. It was all there, surprisingly sharp in detail. It even penetrated some of the blur that had settled over his own memory.

When she had finished, Madro frowned and nodded. His slim body seemed unnaturally tense. He said, almost to himself: "So they were almost all captured —" He paused and, turning, looked at Hanardy. "You have the feeling there will be one more ship?"

Hanardy nodded, not trusting himself to speak.

"How many Dreeghs are there aboard this one ship?" Madro asked.

This time there was no escaping a verbal reply. "Nine," said Hanardy.

He hadn't thought about the exact number before. But he knew the figure was correct. Just for a moment, he *knew* it.

Madro said in an odd tone, "You get it that clearly? Then you must already know many other things as well."

His dark eyes gazed directly into Hanardy's. The unspoken meaning that was in them seemed to be: "Then you already know who I am?"

There was such a hypnotic quality in the other's look that Hanardy had to wage an inner fight

against admitting that he knew.

Madro spoke again. "Were these — this first group of Dreeghs — all killed?"

"Why, I —" Hanardy stopped, amazed. "Gee, I don't know. I don't know what happened to them. But he intended to kill them; up to a certain moment, he intended to; and then —"

"And then what, Steve?" That was Pat, her voice urging him.

"I don't know. He noticed something."

"Who noticed something?" asked Pat.

"Leigh. You know — him. But I don't know what he did after that."

"But where could they be now?" the girl asked, bewildered.

Hanardy remained blank, vaguely guilty, as if somehow he was failing her by not knowing.

He grew aware that Madro was turning away. "There is apparently more to discover here," the Dreegh said quietly. "It is evident that we must re-assess our entire situation; and I might even guess that we Kluggs could through the chance perceptive stimulation of this man achieve so great a knowledge of the universe that, here and now, we might be able to take the next step of development for our kind."

The comment seemed to indicate that the Dreegh was still undecided. Hanardy followed along

behind the others. For a few desperate seconds he thought of jerking out his gun, in the hope that he might be able to fire before the Dreegh could defend himself.

But already doubt was upon him. For this suspicion was just in his head. He had no proof other than the steady stream of pictures in his mind; and that was like a madness having no relation to anything that had been said and done before his eyes. Crazy people might act on such inner pictures, but not stolid, unimaginative Steve Hanardy.

"Gotta keep my feet on the ground!" Hanardy muttered to himself.

Ahead, Professor Ungarn said in a conversational voice: "I've got to give you credit, Thadled. You have already said something that has shocked Pat and myself. You have used the hateful word "Klugg" just as if it doesn't bother you."

"It's just a word," said Madro.

And that was all that was said while they walked. They came to the power room. The girl sank into a chair, while her father and the visitor walked over to the power control board. "The screens are working beautifully," said Professor Ungarn with satisfaction. "I just opened them for the few seconds it took for you to get through them. We've got time to decide what to do, in case this last Dreegh ship attacks us."

Madro walked over near the girl, and settled into a chair. He addressed Professor Ungarn, "What you said a moment ago, about the word and the identification of Klugg — you're right. It doesn't bother me."

The scientist said grimly, "Aren't you fooling yourself a little? Of all the races that know of the galactic civilization, we're the lowest on the scale. We do the hard work. We're like the day laborers on planets such as Earth. Why, when Pat found out, she nearly went mad with self-negation, Galactic morons!" He shuddered.

Madro laughed in a relaxed way; and Hanardy had to admire the easiness of him. If Madro was a Dreegh, then for all Madro knew this, also, was a trap set by the Great Galactic; and yet he seemed unworried. If, on the other hand, he was actually a Klugg, then somehow he had made inferiority right within himself. "I could use some of that," Hanardy thought gloomily. "If these guys are galactic morons, what does that make me?"

Madro was speaking: "We're what we are," he said simply. "It's not really a matter of too much difference in intelligence. It's an energy difference. There's a way here, somewhere, of utilizing energy in a very superior fashion. But you've got to have the energy, and you've got to get it from somewhere. That's what makes the



case of this fellow Leigh interesting. If we could backtrack on what he did here, we might really get at the heart of a lot of things."

Patricia and her father said nothing. But their eyes glistened, as they waited for the man to continue. Madro turned to Hanardy. "That question she asked you before — " he indicated the girl — "when you first untied her. How did *he* leave the solar system after capturing those — Dreeghs?" He hesitated the slightest bit before using the name.

Hanardy said simply, "He didn't exactly leave. It's more like . . . he *was* somewhere else. And he took them with him." He fumbled for words. "You see, things aren't the way they seem. They're — " He stopped, unhappy.

He realized that the two men and the girl were waiting. Hanardy waved his arms aimlessly, indicating things beyond the safeguarding of the meteorite. "All that — that's not real."

Madro turned towards his companions. "It's the concept of a universe of illusion. An old idea; but maybe we should take another look at it."

Professor Ungarn murmured, "It would take complex techniques to make it work."

Hanardy said straining for meaning, "You just keep putting it out there. As if you're doing it,

even though you're not. That tunes you in."

"Put what out, Steve?" It was the girl, her voice as strained as his.

"The world. The universe . . . the whole deal."

"Oh!"

Hanardy went on, "And then, for a moment, you don't put anything there. That's when you do something I don't understand."

"What's that?" The girls' voice almost emotionless, led him forward.

"You stop everything," said Hanardy wonderingly. "You let the nothingness rush in. And then — you become the real you . . . for as long as you have energy."

He stared at the three people, through them, unseeing. As from a distance, Madro's voice came to him:

"You see — it's a matter of energy," the man said calmly. "Hanardy?"

He came back into the room, mentally as well as physically. "Yeah?"

"Where did he get his energy?" Madro asked.

"Uh," said Hanardy, "he got most of it out where it was stored — a kind of dark room."

It was a new thought; a picture came with it of how the energy had been put there by somebody else, not by Leigh. Before Hanardy could speak another word,

Madro was over there beside him.

"Show us!" he said, and his voice was like a fire, burning a path of action, demanding counter-action.

Hanardy led the way, his heavy body trembling. He had the feeling that he had made an admission that spelled victory for the Dreegh. But there was no turning back. If this creature was a Dreegh, then resistance was useless. He knew that intuitively.

"If I could only be sure," Hanardy thought miserably.

And the stupid thing was that he *was* sure. As sure, it seemed to him, as he could ever be. But he wasn't sure enough even to make the attempt to save his own life. As things stood, he'd have to go through with this farce until the Dreegh — satisfied that all was well — destroyed them all in his own good time.

IV

It was twenty minutes later.

... After they had found the little black room to be merely a drab closet where the professor had always kept certain tools, but otherwise empty.

"Where was it stored?" Madro demanded of Hanardy. "I mean the energy that Leigh got."

Hanardy pointed unhappily at the metal wall inside the closet.

"Are you saying the energy was in the wall?"

The question once more disturbed Hanardy's sense of the reality of his own thoughts, and so he simply stood there, shaken, as Pat and Professor Ungarn pressed forward and with a portable instrument tested the wall.

Madro did not join them, nor did he again look into the little room. Hanardy felt an inner tremor as the Dreegh, ignoring what the father and daughter were doing, turned and strode toward him.

"Steve," he said, "I want to talk to you."

He glanced back, raised his voice, "I'm going to take Hanardy for a little private questioning."

"All right!" That was Pat. But neither she nor her father turned. Madro had not waited. His fingers gripped Hanardy's arm firmly at the elbow. Shrinking, Hanardy realized the other's intent.

A test!

To determine how vulnerable he was.

To the death — if he were that weak.

Even as Hanardy had these awarenesses, Madro drew him away from the storeroom and around a corner. Hanardy kept looking back, not daring to call for help but yet hoping that the professor and his daughter would be motivated to follow.

His final view of them showed them still inside the closet, and

the professor was saying, "A series of tests on this wall should—"

Hanardy wondered what they would think when they found him gone — and dead.

Madro drew Hanardy along the side corridor and into a room. He closed the door, and they were alone. Hanardy still not resisting.

Madro stood there for a few moments, tall, lean, smiling.

"Let's settle this once and for all," he said softly. "Myself — against whatever ability you were endowed with."

And because Hanardy had begun to have fantasies, had nurtured a tiny hope that maybe it was true, that maybe something great *had* rubbed off on him — as Professor Ungarn had implied — for a few seconds, Hanardy actually waited for that something inside him to handle this situation.

That was all the time he had — seconds. The speed of Madro's attack, and the total violent intent of it, instantly defeated that waiting reaction.

He was lifted effortlessly, grabbed by one foot, held like a rag doll, and incredibly was about to have his head dashed against the near wall — when, with a primitive survival spasm of effort, Hanardy kicked with his other foot, kicked hard against the wrist of the hand by which Madro held him.

For that moment, for that one attack, it was resistance enough. The Dreegh let him go. Hanardy fell — the slow-motion fall of less than Earth gravity. Far too slow for the speed of Madro's second attack.

In his awkward, muscle-bound way, only one of Hanardy's dragging legs actually struck the floor. The next moment he was caught again by fingers that were like granite biting into his clothes and body — Madro obviously neither heeding nor caring which.

And there was no longer any doubt in Hanardy's mind. He had no special ability by which he might defeat the Dreegh's deadly intent.

He had no inner resources. No visions. He was helpless. His hard muscles were like putty in the steely grip of a man whose strength overwhelmingly transcended his own.

Hanardy ceased his writhing and yelled desperately, "For Pete's sake, why all this murder when there's only five women Dreeghs and four men left? Why don't you Dreeghs change, try once more to become normal?"

As swiftly as it had started, the the violence ended.

Madro let him go, stepped back and stared at him. "A message!" he said. "So that's your role."

Hanardy did not immediately

realize that the threat was ended. He had fallen to the floor. From that begging position he continued his appeal. "You don't have to kill me! I'll keep my mouth shut. Who'd believe me, anyway?"

"What's normal?" The Dreegh's voice was cold and demanding. The radiation from him — uncleanness — was stronger.

"Me," said Hanardy.

"You!" Incredulous tone.

"Yeah, me." Hanardy spoke urgently. "What ails me is that I'm a low-lifer, somehow. But I'm a normal lug. Things balance out in me — that's the key. I take a drink, but not because I have to. It doesn't affect me particularly. When I was in my teens once I tried taking drugs. Hell, I just felt it didn't fit in my body. I just threw it off. That's normal. You can't do that with what *you've* got."

"What's normal?" Madro was cold, steady, remote.

"You're sick," said Hanardy. "All that blood and life energy. It's abnormal. Not really necessary. You can be cured."

Having spoken the strange words, Hanardy realized their strangeness. He blinked.

"I didn't know I was going to say that," he mumbled.

The Dreegh's expression was changing as he listened. Suddenly he nodded and said aloud, "I actually believe we've been given a

communication from the Great Galactic. A twelfth-hour, last-chance offer."

"What will you do with me?" Hanardy mumbled.

"The question," came the steely reply, "is what is the best way to neutralize you? I choose this way!"

A metallic something glittered in the Dreegh's hand. From its muzzle a shimmering line of light reached toward Hanardy's head.

The spaceman flinched, tried to duck, had the cringing thought that this was death and stood there expecting at the very least a terrible shock.

He felt nothing. The light hit his face; and it was as if a pencil beam from a bright flashlight had briefly glared into his eyes. Then the light went, and there he stood blinking a little, but unhurt so far as he could determine.

He was still standing there when the Dreegh said, "What you and I are going to do now is that you're going to come with me and show me all the places on this meteorite where there are armaments or small arms of any kind."

Hanardy walked ahead, kept glancing back; and there, each time he looked, was the long body with its grim face.

The resemblance to Thadled Madro was visibly fading, as if the other had actually twisted his features into a duplication of the

young male Klugg's face, not using makeup at all, and now he was relaxing.

They came to where the Ungarns waited. Father and daughter said nothing at all. To Hanardy they seemed subdued; the girl was strangely pale. He thought: "They do know!"

The overt revelation came as the four of them arrived in the main living quarters. Professor Ungarn sighed, turned and — ignoring Hanardy — said, "Well, Mr. Dreegh, my daughter and I are wondering why the delay in our execution?"

"Hanardy!" was the reply.

Having uttered the name, as if Hanardy himself were not present, the Dreegh stood for a long moment, eyes narrowed, lips slightly parted, even white teeth clamped together. The result was a kind of a snarling smile.

"He seems to be under your control. Is he?" That was Pat Ungarn, in a small voice. The moment she had spoken, and thus attracted the Dreegh's attention, she shrank, actually retreated a few steps, as he looked at her.

Sween-Madro's tense body relaxed. But his smile was as grim as ever. And still he ignored Hanardy's presence.

"I gave Steve a special type of energy charge that will nullify for the time being what was done to him."

Professor Ungarn laughed curtly. "Do you really believe that you can defeat this — this being — William Leigh . . . defeat him with what you have done to Steve? After all, he's your real opponent, not Hanardy. This is a shadow battle. One of the fighters has left a puppet to strike his blows for him."

Sween-Madro said in an even tone, "It's not as dangerous as it seems. Puppets are notoriously poor fighters."

The professor argued, "any individual of the race known to lesser races as Great Galactics — which was obviously not their real name — must be presumed to have taken all such possibilities into account. What can you gain by delay?"

Sween-Madro hesitated, then: "Steve mentioned a possible cure for our condition." His voice held an edge in it.

There was a sudden silence. It settled over the room and seemed to permeate the four people in it.

The soundless time was broken by a curt laugh from Sween-Madro. He said, "I sensed that for a few seconds I seemed — "

"Human," said Pat Ungarn. "As if you had feelings and hopes and desires like us."

"Don't count on it." The Dreegh's voice was harsh.

Professor Ungarn said slowly, "I suspect that you analyzed Steve has a memory of mental contact

with a supreme, perhaps even an ultimate, intelligence. Now, these earth people when awake are in that peculiar, perennially confused state that makes them unacceptable for galactic citizenship. So that the very best way to defend yourself from Steve's memory is to keep him awake. I therefore deduce that the energy charge you fired at him was designed to maintain in continuous stimulation the waking center in the brain stem.

"But that is only a temporary defense. In four or five days, exhaustion in Hanardy would reach an extreme state, and something in the body would have to give. What will you have then that you don't have now?"

The Dreegh seemed surprisingly willing to answer, as if by uttering his explanations aloud he could listen to them himself, and so judge them.

He said, "My colleagues will have arrived by then."

"So then you're all in the trap," said Professor Ungarn. "I think your safest bet would be to kill Pat and me right now. As for Steve — "

Hanardy had been listening to the interchange with a growing conviction that this melancholy old man was arguing them all into being immediately executed.

"Hey!" he interrupted urgently. "What are you trying to do?"

The scientist waved at him im-

patiently. "Shut up. Steve. Surely you realize that this Dreegh will kill without mercy. I'm trying to find out why he's holding off. It doesn't fit with what I consider to be good sense."

He broke off, "Don't worry about him killing you. He doesn't dare. You're safe."

Hanardy felt extremely unsafe. Nevertheless, he had a long history of accepting orders from this man; so he remained dutifully silent.

The Dreegh, who had listened to the brief interchange thoughtfully, said in an even tone that when his companions arrived, he, Hanardy and Pat Ungarn would go to Europa. He believed Pat was needed on such a journey. So no one would be killed until it was over.

"I'm remembering," Sween-Madro continued, "what Steve said about the Great Galactic noticing something. I deduce that what he noticed had to do with Steve himself. So we'll go to Spaceport and study Steve's past behavior there. Right now, let's disarm the entire place for my peace of mind."

Clearly, it would not be for anyone else's.

From room to room, and along each corridor, silently the three prisoners accompanied their powerful conqueror.

And presently every weapon in

the meteorite was neutralized or disposed of. Even energy sources that might be converted were sealed off. Thus, the meteorite screens were actually de-energized and the machinery to operate them, wrecked.

The Dreegh next cut off escape possibilities by dismantling several tiny space boats. The last place they went, first Hanardy, then the professor, then Pat, and finally Sween-Madro, was Hanardy's space freighter. There also, all the weapons were eliminated, and the Dreegh had Hanardy dismantle the control board. From the parts that were presently lying over the floor, the gaunt man, with unerring understanding, selected key items. With these in hand, he paused in the doorway. His baleful gaze caught Hanardy's shifting eyes. "Steve!" he said. "You'll stay right here."

"You mean, inside my ship?"

"Yes. If you leave here for any reason, I'll kill you. Do you understand?"

Hanardy glanced helplessly toward Professor Ungarn and then back at the Dreegh. He said, "There's some work the professor wanted me to do."

"Professor Ungarn — " it was the vampire's harsh voice cutting across Hanardy's uncertain protest — "tell him how unimportant such work is."

Hanardy was briefly aware of

the old man's wan smile. The scientist said wearily, "Pat and I will be killed as soon as we have served our purpose. What he will eventually do with you, we don't know."

"So you'll stay right here. You two come with me," Sween-Madro ordered the professor and his daughter.

They went as silently as they had come. The airlock door clanged. Hanardy could hear the interlocking steel bolts wheeze into position. After that, no sound came.

The potentially most intelligent man in the solar system was alone — and wide awake.

V

Sitting, or lying down, waiting posed no problems for Hanardy. His years alone in space had prepared him for the ordeal that now began. There was a difference.

As he presently discovered when he lay down in his narrow cot, he couldn't sleep.

Twenty-four earth hours ticked by.

Not a thinking man, Steve Hanardy; nor a reader. The four books on board were repair manuals. He had thumbed through them a hundred times, but now he got them out and examined them again. Every page was, as he had expected, dully familiar. After a slow hour he used up their possibilities.

Another day, and still he was wide-eyed and unsleeping, but there was a developing restlessness in him, and exhaustion.

As a spaceman, Hanardy had received indoctrination in the dangers of sleeplessness. He knew of the mind's tendency to dream while awake, the hallucinatory experiences, the normal effects of the unending strain of wakefulness.

Nothing like that happened.

He did not know that the sleep center in his brain was timelessly depressed and the wake center timelessly stimulated. The former could not turn on, the latter could not turn off. So between them there could be none of the usual interplay with its twilight states.

But he could become more exhausted.

Though he was lying down almost continuously now, he became continually more exhausted.

On the fourth "morning" he had the thought for the first time: this is going to drive me crazy!

Such a fear had never before in his whole life passed through his mind. By late afternoon of that day, Hanardy was scared and dizzy and hopeless, in a severe dwindling spiral of decreasing sanity. What he would have done had he remained alone was not at that time brought to a test.

For late on that fourth "day" Pat Ungarn came through the airlock, found him cowering in his

bunk and said, "Steve, come with me. It's time we took action."

Hanardy stumbled to his feet. He was actually heading after her when he remembered Sween-Madro's orders to him, and he stopped.

"What's the matter?" she demanded.

He mumbled simply, "He told me not to leave my ship. He'll kill me if I do."

The girl was instantly impatient. "Steve, stop this nonsense." Her sharp words were like blows striking his mind. "You haven't any more to lose than we have. So come along!"

And she started back through the airlock. Hanardy stood, stunned and shaking. In a single sentence, spoken in her pre-emptory fashion, she challenged his manhood by implication, recognized that the dumb love he felt for her made him her slave and so re-established her absolute ascendancy.

Silently, tensely, he shuffled across the metal floor of the airlock and moments later was in the forbidden meteorite.

Feeling doomed.

The girl led the way to what was, in effect, the engine room of the meteorite.

As Steve trailed reluctantly behind her, Professor Ungarn rose up from a chair and came forward, smiling his infinitely tired smile.

His greeting was, "Pat wants to tell you about intelligence. Do you know what your I.Q. is?"

The question barely reached the outer ramparts of Hanardy's attention. Following the girl along one corridor after another, a fearful vision had been in his mind, of Sween-Mardo suddenly rounding the next corner and striking him dead. That vision remained, but along with it was a growing wonder: *Where* was the Dreegh?

The professor snapped, "Steve do you hear me?"

Forced to look at him, Hanardy was able to remember proudly that he belonged in the 55th percentile of the human race, intelligence-wise, and that his I.Q. had been tested at 104.

"The tester told me that I was above average," Hanardy said in a tone of pleasure. Then, apologetic again, he added, "Of course, beside you guys I'm nothing."

The old man said, "On the Klugg I.Q. scale you would probably rate higher than 104. We take into account more factors. Your mechanical ability and spatial relations skill would not be tested correctly by any human I.Q. test that I have examined."

He continued, "Now, Steve, I'm trying to explain this all to you in a great hurry, because some time in the next week you're going to be, in flashes, the most intelligent man in the entire solar system, and

there's nothing anybody can do about it except help you use it. I want to prepare you."

Hanardy, who had anxiously stationed himself so that he could keep one eye on the open door — and who kept expecting the mighty Dreegh to walk in on the little conspiratorial group of lesser beings — shook his head hopelessly.

"You don't know what's already happened. I can be killed. Easy. I've got no defenses."

He glumly described his encounter with the Dreegh and told how helpless he had been. "There I was on my knees, begging, until I just happened to say something that made him stop. Boy, *he* sure didn't think I was unkillable."

Pat came forward, stood in front of him, and grabbed his shoulders with both hands.

"Steve," she said in an urgent voice, "above a certain point of I.Q. mind actually is *over* matter. A being above that intelligence level cannot be killed. Not by bullets, nor by any circumstance involving matter. Now listen: in you is a memory of such an intelligence level. In manhandling you, the Dreegh was trying to see what limited stress would do. He found out. He got the message from the Great Galactic out of you.

"Steve, after that he didn't *dare* put a bullet into you, or fire

a death-level energy beam. Because that would force this memory to the surface!"

In her intense purposefulness she tried to move him with her hands. But that only made Hanardy aware of what a girlish body she had. So little body, so much imperious woman — it startled him, for she could barely budge him, let alone shake him.

She said breathlessly, "Don't you see, Steve? You're going to be king! Try to act accordingly."

"Look — " Hanardy began, stolidly.

Rage flashed into her face. Her voice leaped past his interjection. "And if you don't stop all this resistance, in the final issue *I'll* put a bullet into your brain myself, and then you'll see."

Hanardy gazed into her blue eyes, so abruptly furious. He had a sinking conviction that she would do exactly what she threatened. In alarm, he said, "For Pete's sake, what do you want me to do?"

"Listen to what dad has to say!" she commanded. "And stop looking the other way. You need a high-speed education, and we haven't got much time."

That last seemed like a total understatement to Hanardy. His feeling was that he had no time at all.

Awareness saved him, then. There was the room with its machinery, and the old man and his

daughter; and there was he with his mind jumping with the new fear of her threat. Hanardy had a flitting picture of the three of them lost forever inside this remote meteorite that was just one tiny part of Jupiter's colossal family of small, speeding particles of matter — a meaningless universe that visibly had no morality or justice, because it included without a qualm creatures like the Dreeghs.

As his skittering thought reached that dark depth, it suddenly occurred to Hanardy that Pat couldn't shoot him. She didn't have a gun. He opened his mouth to tell her of her helplessness. Then closed it again.

Because an opportunity might open up for her to obtain a weapon. So the threat remained, receded in time . . . but not to be dismissed. Nonetheless, he grew calmer. He still felt compelled, and jittery. But he stayed there and listened, then, to a tiny summary of the story of human intelligence and the attempts that had been made to measure it.

It seemed human intelligence tests were based on a curve where the average was 100. Each test Professor Ungarn had seen revealed an uncertainty about what constituted an intelligence factor, and what did not. Was the ability to tell left from right important to intelligence? One test included it.

Should an individual be able to solve brain twisters? Many testers considered this trait of great importance. And almost all psychologists insisted on a subtle understanding of the meaning of words and many of them. Skill at arithmetic was a universal requirement. Quick observation of a variety of geometric shapes and forms was included. Even a general knowledge of world conditions and history was a requirement in a few tests.

"Now, we Kluggs," continued the professor in his melancholy voice, "have gone a step beyond that."

The words droned on through Hanardy's mind. Kluggs were theory-operating people . . . theories based on primary and not secondary abilities. Another race, "higher" than the Kluggs — called the Lennels — operated on Certainty . . . a high harmonic of Authority.

"Certainty, with the Lennels," said the old man, "is of course a system and not an open channel. But even so it makes them as powerful as the Dreeghs."

On an I.Q. curve that would include humans, Kluggs, Lennels and Dreeghs, the respective averages would be 100, 220, 380, and 450. The Dreeghs had an open channel on control of physical movement.

"Even a Great Galactic can only move as fast as — he cannot move faster than — a Dreegh," Professor Ungarn commented and ex-

plained, "Such open channels are pathways in the individual to a much greater ability than his standard I.Q. permits."

Musical, mathematical, artistic, or any special physical, mental or emotional ability was an open channel that operated outside the normal human, Klugg, or even the Dreegh curve. By definition, a Great Galactic was a person whose I.Q. curve included only open channels.

It had been reported that the open channel curve began at about 80. And, though no one among the lesser races had ever seen anything higher than 3,000 — the limits of the space phenomenon — it was believed that the Great Galactic I.Q. curve ascended by types to about 10,000.

"It is impossible," said the Professor's melancholy voice, "to imagine what kind of an open channel that would be. An example of an 800 open channel is Pat. She can deceive. She can get away with a sleight of hand, a feint, a diversion — "

The old man stopped suddenly. His gaze flicked past Hanardy's right shoulder and fastened on something behind him that Hanardy couldn't see.

VI

The spaceman froze with the sudden terrified conviction

that the worst had happened, and that the Dreegh Sween-Madro was behind him.

But it couldn't be, he realized. Professor Ungarn was looking at the control board of the meteorite. There was no door there.

Hanardy allowed himself to turn around. He saw that on the big instrument panel a viewplate had lighted, showing a scene of space.

It was a familiar part of the starry heavens looking out toward interstellar space, away from the sun. Near the center of the scene a light was blinking.

Even as Hanardy watched, the viewplate picture shifted slightly, centering exactly on the blinking light.

Behind Hanardy, there was a gasp from the girl, "Dad," she whispered, "is it — ?"

Professor Ungarn had walked toward the viewplate, past Hanardy and so into the latter's range of vision. The old man nodded with an air of utter weariness.

"Yes, I'm afraid it is, my dear. The other eight Dreeghs have arrived."

He glanced hopelessly at Hanardy. "My daughter had some kind of idea of using you against Sween-Madro before they got here."

Hanardy said blankly, "Using me?"

The meaning of that brought him with a jar out of his own body exhaustion.

The old man was shrugging. "Whatever the merit of her plan, of course, now it's too late."

He finished dully, "Now we'll learn our fate."

The tableau of dejection held for seconds only. A sound, a high-pitched human voice, broke through the silence and the dark emotion that filled the room.

"How far away are they?" It was the girl's voice, from behind Hanardy, strained but recognizable. "Exactly how long till they get here?"

Hanardy's mind stirred from its thrall as Professor Ungarn said dully, "Less than two hours would be my guess. Notice — "

He thereupon started a technical comment to her about the speed with which the view plate had centered on the ship, implying — he said — the enormous velocity of its approach.

His explanation was never completed. In the middle of it, the girl uttered a screech and then, to Hanardy's amazement, she raced past him and flung herself, arms flailing, at the old man.

She kept striking at his face then, yelling the most bloodcurdling curses in a furious soprano voice. A long moment went by before Hanardy was able to make out what she was saying:

" — You stupid old man! What do you mean, only two hours? Two hours is all we need, damn you!

At that point Hanardy emerged from his surprise. Awkwardly, he jumped over her, grabbed her, pulled her away. "For Pete's sake!" he cried.

The girl tried to turn on him, her struggling body writhing in his grip. But he held her, uttering apologies the while. Finally, she realized that his strength was too much for her. She ceased her efforts, and with an attempt at control said grimly, "Steve, this crazy old fool who is my father has twice now accepted defeat — when it wasn't necessary!"

She broke off, addressed the old man. Her voice went up a whole octave as she said, "Show Steve what you showed me only a few minutes before I went to get him."

Professor Ungarn was white and haggard. "I'm sorry, my dear," he mumbled. He nodded to Hanardy. "I'm sure you can let her go now."

Hanardy released the girl. She stood straightening her clothes, but her eyes still flashed. "Show him, damn it," she snapped, "and make it quick."

Professor Ungarn took Hanardy's arm and drew him toward the control board, speaking in apologetic tones. "I failed my daughter. But the truth is I'm over three hundred years old. That's just about it for a Klugg; so I keep forgetting how younger people might feel."

Pat — he went on — was a

product of a late-life marriage. Her mother had flatly refused to go along on his assignment as a galactic watcher. In bringing the girl with him, he had hoped to shield her from the early shock of discovering that she was a member of a servant race. But isolation had not, in fact, saved her feelings. And now, their very remoteness from the safeguarding military strength of associated lower-level races had brought a horrifying threat of death from which he had decided there was no escape.

"So it didn't even occur to me to tell her — "

"Show him," the girl's voice came shrilly from the rear, "what you didn't bother to tell me."

Professor Ungarn made a few control adjustments, and there appeared on the viewplate first a picture of a room and then of a bed in one corner with an almost naked man lying on it.

The bed came into full focus, filled the viewplate. Hanardy drew in his breath with a sharp hiss of disbelief. It was the Dreegh.

The man who lay there, seemingly unconscious, bore almost no resemblance to the tall, vital being who had come aboard in the guise of Pat's fiance. The body on the bed was unnaturally thin; the rib cage showed. His face, where it had been full-cheeked, was sunken and hollow.

"They need other people's blood and life energy to survive, and they need it almost continuously," the old man whispered. "That's what I wanted to show you, Steve." Her tone grew scathing, as she continued, "My father didn't let me see that until a few minutes ago. Imagine! Here we are under sentence of death, and on the day, almost on the hour that the other Dreeghs are due to arrive, he finally reveals it — something he had watched developing for days."

The old man shut off the scene on the viewplate and sighed.

"I'm afraid it never occurred to me that a Klugg could challenge a Dreegh. Anyway, I imagine Sween-Madro originally arrived here expecting to use us as a source of blood and life force. And then when you showed all that Great Galactic programming, he changed his mind and decided to await the coming of his colleagues. So there he is — at our mercy, Pat thinks."

Hanardy had spent his years of association with this couple deferring to them. So he waited now, patiently, for the scientist to tell him what to do about the opportunity.

The old man said, with a sigh, "Pat thinks if we make a bold attack at this stage, we can kill him."

Hanardy was instantly skeptical, but he had never been able to influence this father and daughter in any way, and he was about to follow the old, withdrawing pattern, when

he remembered again that there were no weapons around to make any kind of attack whatsoever.

He pointed out that fact and was still talking when he felt something cold touch his hand.

Startled, he glanced down and back — and saw that the girl was pushing a metal bar about one and a half feet long, at his palm. Involuntarily, still not thinking, he closed his fingers over it. As soon as he had it firmly in one chunky hand, Hanardy recognized by its feel that it was a special aluminum alloy, hard, light, and tough.

The girl spoke. "And just in case that dumb look on your face means what I think it does," she said, "here are your orders: take that bar, go where the Dreegh is and beat him to death with it."

Hanardy turned slowly, not quite sure that it was he who was being addressed. "Me?" he said. And then, after a long pause, "Hey!"

"And you'd better get started," said the girl, "there isn't much time."

"Hey!" repeated Hanardy, blankly.

VII

Slowly, the room swung back into a kind of balance. And Hanardy grew aware that the girl was speaking again:

"I'll go in through the door fac-



ing the bed," she stated. "If he can awaken at all in his condition, I want to ask him some questions. I must know about the nature of super-intelligence."

For a brain in as dulled state as Hanardy's, the words were confusing. He had been striving to adjust to the idea that he was the one who was supposed to go in to the Dreegh, and simultaneously he was bracing himself against what she wanted him to do.

With so many thoughts already in his mind, it was hard to get the picture that this slip of a girl intended to confront the Dreegh by herself.

Pat was speaking again, in an admonishing tone, "You stand just inside the other door, Steve. Now listen carefully. Do your best not to attract his attention, which I hope will be on me. The information I want is for your benefit. But when I yell, 'Come!' don't delay. You come and you kill, understand?"

Hanardy had had a thought of his own. A sudden stark realization. The realization was that in this deadly dangerous situation there was ultimately a solution.

He could cast off in his own spacecraft!

But that meant he would have to obtain the key equipment Sween-Madro had taken from his ship. Obtain it, repair the control board, get away!

To obtain it he'd have to go to where it was — into the Dreegh's bedroom. At least apparently, he would have to do exactly what Pat wanted.

Fear dimmed before that obvious purpose, yielded to the feeling that there was no other way.

Thinking thus, Hanardy abruptly uttered agreement. "Yep," he said, "I understand."

The girl had started toward the door. At the tone of his voice, she paused, turned back and gazed at him suspiciously. "Now, don't you go having any plans of your own!" She spoke accusingly.

Hanardy was instantly guilty, instantly confused. "For Pete's sake," he said, "I don't like what you want to do — going in there and waking this guy. I don't see any good in my listening to a lecture on intelligence. I'm not smart enough to understand it! So, my vote is if we're going in let's just kill him right off."

The girl had turned away. She did not glance back as she walked out of the room. Hanardy grimaced at Professor Ungarn. Moments later he was through the door, following her, weary, hopeless, mentally shut down, but resigned.

Pat heard him stumbling along behind her. Without looking around she said, "You're a weapon, Steve. I have to figure out how to fire that weapon and escape. Basically, that's all we need to do! Get away

from the Dreeghs and hide. Understand?"

He was a man stumbling along metal and rock corridors in a remote part of the solar system, his normal stolidness made worse now by an immense weariness. So he heard the words she uttered; even understood their surface meaning.

It was enough awareness for him to be able to mumble, "Yeah — yeah!"

Otherwise — she went on when he had acknowledged — he might go off like a firecracker, discharging whatever energy *homo-galactic* had endowed him with in a series of meaningless explosions aimed at nothing and accomplishing nothing.

So the question was: What kind of weapon was he?

"As I see it," she finished, "that information we can only hope to gain from the Dreegh. That's why we have to talk to him."

"Yeah," mumbled Hanardy, hoarsely. "Yeah."

They came all too quickly to their destination. At the girl's nod Hanardy broke into an uneven lope and ran around to the far corridor. He fumbled the door open and stepped inside.

At this point Pat had already been through her door for fifteen seconds. Hanardy entered upon a strange scene, indeed.

On the bed, the almost naked

body was stirring. The eyes opened and stared at the girl, and she said breathlessly, "That! What you just now did — becoming aware of me. How do you do that?"

From where he stood, Hanardy could not see the Dreegh's head. He was aware only that the Dreegh did not answer.

"What," asked Pat Ungarn, "is the nature of the intelligence of a Great Galactic?"

The Dreegh spoke. "Pat," he said, "you have no future, so why are you making this inquiry?"

"I have a few days."

"True," said Sween-Madro.

He seemed unaware that there was a second person in the room. *So he can't read minds!* Hanardy exulted. For the first time he had hope.

"I have a feeling," Pat was continuing, "that you're at least slightly vulnerable in your present condition. So answer my question! Or —"

She left the threat and the sentence unfinished.

Again the body on the bed shifted position. Then:

"All right, my dear, if it's information you want, I'll give you more than you bargained for."

"What do you mean?"

"There are no Great Galactics," said the Dreegh. "No such beings exist, as a race. To ask about their intelligence is — not meaningless, but complex."

"That's ridiculous!" Pat's tone was scathing. "We saw him!"

She half-glanced at Hanardy for confirmation, and Hanardy found himself nodding his head in full agreement with her words. Boy, *he* sure knew there was a great Galactic.

On the bed, Sween-Madro sat up.

"The Great Galactic is a sport! Just a member of some lesser race who was released by a chance stimulus so that he temporarily became a super-being. The method?" The Dreegh smiled coldly. "Every once in a while, accidentally, enough energy accumulates to make such a stimulus possible. The lucky individual, in his super-state, realized the whole situation. When the energy had been transformed by his own body and used up as far as he himself was concerned, he stored the transformed life-energy where it could eventually be used by someone else. The next person would be able to utilize the energy in its converted form. Having gone through the energy, each recipient in turn sank back to some lower state.

"Thus William Leigh, earth reporter, had for a few brief hours been the only Great Galactic in this area of space. By now his super-ability is gone forever. And there is no one to replace him.

"And that, of course," said the Dreegh, "is the problem with Han-

ardy. To use his memory of intelligence in its full possibility, he'll need life energy in enormous quantities. Where will he get it? He won't! If we're careful, and investigate his background cautiously, we should be able to prevent Steve getting to any source, known or unknown."

Hanardy had listened to the account with a developing empty feeling from the pit of his stomach. He saw that the color had drained from the girl's face.

"I don't believe it," she faltered. "That's just a — "

She got no further, because in that split instant the Dreegh was beside her. The sheer speed of his movement was amazing. Hanardy, watching, had no clear memory of the vampire actually getting off the bed.

But now, belatedly, he realized what the Dreegh's movements on the bed must have been — maneuverings, re-balancings. The creature-man had been surprised — had been caught in a prone, helpless position, but used the talk to brace himself for attack.

Hanardy was miserably aware that Pat Ungarn was equally taken by surprise. Sween-Madro's fingers snatched at her shoulder. With effortless strength, he spun her around to face him. His lank body towered above her, as he spoke.

(Continued on page 147)

IF... and WHEN

by LESTER DEL REY

Such material as dreams are built on

Cyrus Brump knew all about meteor collisions in space; he'd read all the science-fiction stories about it forty years before. There was always a tremendous thump, a shrill whistle, and a horrendous explosion. Then the air rushed instantly into space, except where huge doors slammed shut to cut off the livable sections.

But he wasn't thinking of that as he sat in the control room of the *Nomad* with the ship's one-man pilot-and-crew. Joe had already explained that most meteoroids — they were only meteors when they were burning up in the atmosphere of a planet — were tiny grains of dust.

Then Brump felt a curious jerk through the floor plates. Joe grunted. "Meteoroid hit us. Must be a big one — size of a small pea."

No doors slammed shut. The plastic lining between the thin sheets of soft aluminum that made up the hull had a fantastic surface tension that healed any hole instantly and held the air. There was no sound of a huge explosion, because the metal of the floor was a "dumb" metal — one that was dead to sound and unable to ring.

Joe went back to inspect the damage, pointing to the dark spot where the meteoroid had entered. Then he swore as he saw that the housing of the generator that controlled the ion rockets was badly twisted, and that half the stores were ruined by the explosion of the little pebble from space.

He hunted around until he found a can and began squirting it over the housing. In a few minutes, the scar across it began to fade and the

housing had resumed its former shape.

"Plastic memory," he told Brump. "Lots of plastics try to get back to their original shape when distorted, but this is meant to recover from almost anything. The goo just speeds it up. Could do it with heat, but my welding torch doesn't get hot enough to soften this plastic."

"Then we'll be all right?" Brump asked doubtfully.

Joe grimaced. "Sure. But all our food's gone — that was what was in those stores. Oh, well, I guess we'll have to eat the walls."

Brump stared at the panelling nailed in place between storage and engine rooms. He didn't fancy eating a diet of walls soaked in water for nearly a month. But at least they'd survive. Maybe it wouldn't be much worse than Joe's cooking, at that.

There is nothing fantastic about the above account, except perhaps for the idea of such a small ship. There are no *if* elements in it, and not too many questions of *when*. It merely involves using slightly improved materials of types already in general use today, though most of them would have been unthinkable thirty years ago.

The edible walls aren't even evolved beyond what is now available. Material that can be used as building forms — sawed, drilled

and even nailed up — exists. It is made of powdered milk, hominy grits, cornstarch flour and dried banana flakes. It can be shaped into construction boards to replace the usual building material for walls — and since it is both light and strong, it should serve excellently in a spaceship.

The plastic housing for the generator is a bit beyond what we have now, but only in degree. The days when plastics couldn't be placed in boiling water without melting are long gone. Many of the modern ones can take quite high heats, and some can withstand the blast of a blowtorch; they operate at higher temperatures than many of the common metals.

Plastic memory is also common enough. Contact lenses, for instance, have to be cut on a special lathe; if they were pressed into shape with hot dies, it would be a lot simpler — but the plastic would gradually return to its original form. (The softening goo, however, doesn't yet exist.) And self-healing substances are used inside tubeless tires to seal up holes before the air can leak out.

The use of laminates — or multiple layers cemented together — of thin sheets of aluminum and soft plastic as a cement was proved more effective against missiles than hard steel back in World War II. When a rigid shield is penetrated, the damage is usually great; but the softer multi-layer shield absorbs

most of the energy of the blow inside itself, and is virtually foolproof against rupturing.

Almost all metal is pretty ugly stuff in one way, however. It rings; and it transmits sound. Living inside a spaceship of metal would normally be something like sitting inside a ringing bell. The effect can be muffled by absorbent coatings, but they add weight and bulk.

This problem was tackled and licked by adding materials to the alloy which form tiny particles that soak up the energy of the sound. The result is a metal with the strength and toughness of steel, but the deadness of soft lead.

Science is only just beginning to get some understanding of even the most basic nature of the materials on which our technology is based. This may seem natural in the case of plastics, which are almost entirely the product of this century. But men have used metals for at least six thousand years. Alloys are as old as Egypt, and excellent steel was made during the Middle Ages — by trial and error. Nobody knew how to design deliberately to fit some special need.

It was only a hundred years ago that Dr. Henry Sorbey learned how to study metals under high enough magnification to see the way the crystals behaved. And until the invention of the electron microscope, nobody could hope to go beyond the

crystalline structure down to the molecular level where most of the secrets are to be found.

Today, we're just on the verge of gaining real knowledge. What we do know would fill a dozen encyclopedias with tables and facts; and one of the reasons such an engineering encyclopedia might be necessary is that too many of those facts aren't yet reduced to a full theoretical understanding of the principles behind them.

Some of what we know — as well as the fascinating areas where we're still ignorant — is covered in a recent book issued by Basic Books. It's entitled appropriately *The New Materials* and is written by David Fishlock. It isn't a book that I'd call very exciting to read — but the information is so fascinating that I'm going back immediately to read it again from cover to cover. There are a hundred story plots in it, and material to change the background thinking of almost every imagined future I've ever read.

The book even covers such things as the proper way to build a ship from ice. Poul Anderson used ice rafts to fight a war in *War of the Wing Men*, and he did his usual fine job of thinking it out. But several years before, men actually worked out the best means for constructing real ice ships.

It turned out that ice wasn't strong enough. But by adding cellulose fiber — the "slurry" that is

used to make paper — to the water before freezing, the resulting material was more than 20 times as strong, just as light, and almost as cheap. They even cooked up a name for it — Pykcrete. The only trouble was that the Pykcrete had the same nasty habit of melting as pure ice, so it didn't work out well.

But the experiment proved again what we've been discovering for the past twenty years — that composite materials made up of two dissimilar materials are often fantastically better than any single substance. For instance, plywood and fiberglass-plastics. But some of the materials are odd, indeed. Carbon doesn't seem to be much use as a structural material. Yet when thin fibers of carbon are put together in parallel and then bonded with almost any of the new glues, the result is one of the stiffest and strongest composite materials known. Without it, the lifting motors for some of the vertical-take-off-and-landing experimental airplanes would be impossible.

We need a lot better rocket motors for our spaceships. If we are ever to have Joe's little ship capable of going from planet to planet, we'll need something at least as good as the ion drive I mentioned.

That's mostly just a matter of the right material. Ions are the charged parts of atoms left after

electrons are stripped away. We have a substance which can be broken down into ions and electrons — cesium metal, heated until it becomes a gas. When this is sent through porous tungsten as a catalyst (or agent to break down the ion-electron bonds), we get a fair supply of ions. Once released, these can be driven to extremely high velocities by coils carrying an electric current.

The present models aren't efficient enough. We don't know how to make our tungsten catalyst behave as well as we know it should in theory. But we're learning, and the answer must lie within the secrets just beyond what we have found to date.

We haven't found Maxwell's demon yet, either; this was supposed to be an imp who sent hot molecules in one direction and cold ones in another. Effectively, it would act on heat as a modern silicon rectifier acts on electricity. Probably some such means exists for getting heat or cold as we want, if we can find a little more about how our materials handle heat conduction.

Meantime, we do have something that's an almost perfect insulator in one direction and a good conductor in another. A form of carbon called pyrolytic graphite (formed by depositing carbon under an arc) transmits heat across its grain but not along it.

We have plastic films that will

conduct fresh water out of salt in a one-way traffic, which may provide fresh water from the sea. Another thin film being developed by General Electric will pass oxygen and carbon dioxide but is impervious to water; eventually, men wearings suits of that may work on the sea floor and get their oxygen directly from that dissolved in the water.

Even spacesuit design is being altered because of new materials. The latest idea calls for a thin elastic film that is not inflated, but hugs the skin; and it will be slightly porous, so that the body temperature can be regulated by our an-

cient and useful trick of perspiring. The last three inventions aren't perfected yet. We have to learn a little more about what makes materials behave as they do so that we can tailor new ones exactly as we want them. It took us thousands of years to learn the gross facts and another fifty to begin any deeper understanding of the nature of materials. At the rate we've been going, it should take us another ten years to discover more about how things work than everything we thought we knew before the first Sputnik went up.

Or maybe five!

END

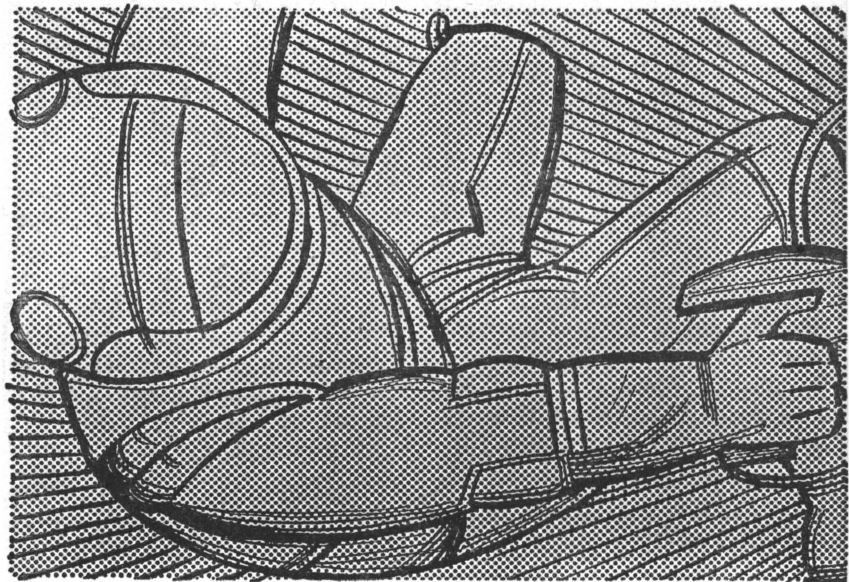
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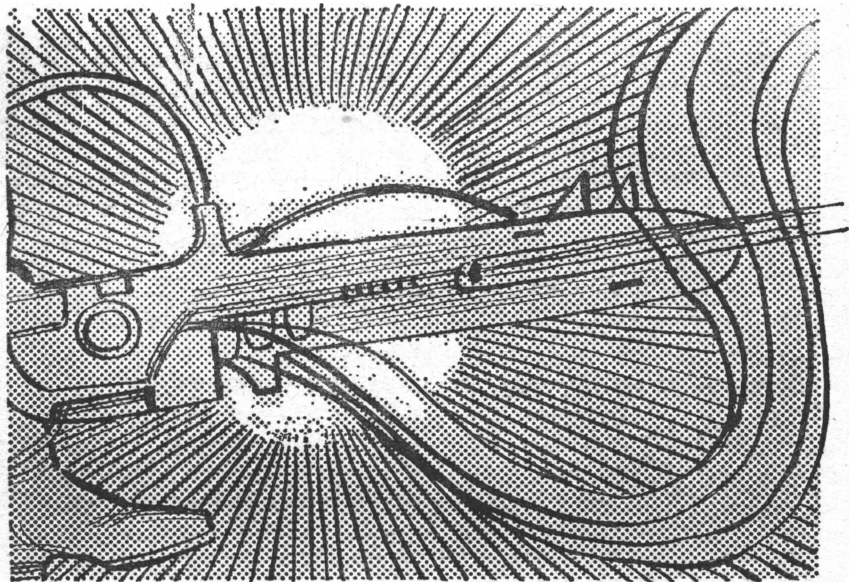


OR BATTLE'S SOUND

by HARRY HARRISON

Illustrated by *ADKINS*.

*The Edinburgers had the only way
to launch an interplanetary war.
Earth knew the answer — men to go
where ships and missiles dared not!*



IF • *Novelette*

I

“Combatman Dom Priego, I shall kill you.” Sergeant Toth shouted the words the length of the barracks compartment.

Dom, stretched out on his bunk and reading a book, raised startled eyes just as the Sergeant snapped his arm down, hurling a gleaming combat knife. Trained reflexes

raised the book, and the knife thudded into it, penetrating the pages so that the point stopped a scant few inches from Dom's face.

“You stupid Hungarian ape!” he shouted. “Do you know what this book cost me? Do you know how old it is?”

“Do you know that you are still alive?” the Sergeant answered, a trace of a cold smile wrinkling the

corners of his cat's eyes. He stalked down the gangway, like a predatory animal, and reached for the handle of the knife.

"No you don't," Dom said, snatching the book away. "You've done enough damage already." He put the book flat on the bunk and worked the knife carefully out of it — then threw it suddenly at the Sergeant's foot.

Sgt. Toth shifted his leg just enough so that the knife missed him and struck the plastic deck covering instead. "Temper, combat-man," he said. "You should never lose your temper. That way you make mistakes, get killed." He bent and plucked out the shining blade and held it balanced in his fingertips. As he straightened up, there was a rustle as the other men in the barracks compartment shifted weight, ready to move, all eyes on him. He laughed.

"Now you're expecting it, so it's too easy for you." He slid the knife back into his boot sheath.

"You're a sadistic bowb," Dom said, smoothing down the cut in the book's cover. "Getting a great pleasure out of frightening other people."

"Maybe," Sgt. Toth said, undisturbed. He sat on the bunk across the aisle. "And maybe that's what they call the right man in the right job. And it doesn't matter anyway. I train you, keep you alert, on the jump. This keeps you alive. You

should thank me for being such a good sadist."

"You can't sell me with that argument, Sergeant. You're the sort of individual this man wrote about, right here in this book that you did your best to destroy . . ."

"Not me. You put it in front of the knife. Just like I keep telling you pinkies. Save yourself. That's what counts. Use any trick. You only got one life, make it a long one."

"Right in here . . ."

"Pictures of girls?"

"No, Sergeant, words. Great words by a man you never heard of, by the name of Wilde."

"Sure. Plugger Wyld, fleet heavyweight champion."

"No, Oscar Fingal O'Flahertie Wills Wilde. No relation to your pug — I hope. He writes 'As long as war is regarded as wicked, it will always have its fascination. When it is looked upon as vulgar, it will cease to be popular.'"

Sgt. Toth's eyes narrowed in thought. "He makes it sound simple. But it's not that way at all. There are other reasons for war."

"Such as what . . .?"

The Sergeant opened his mouth to answer, but his voice was drowned in the wave of sound from the scramble alert. The high-pitched hooting blared in every compartment of the spacer and had its instant response. Men moved. Fast.

The ship's crew raced to their action stations. The men who had been asleep just an instant before were still blinking awake as they ran. They ran and stood, and before the alarm was through sounding the great spaceship was ready.

Not so the combatmen. Until ordered and dispatched, they were just cargo. They stood at the ready, a double row of silver-gray uniforms, down the center of the barracks compartment. Sgt. Toth was at the wall, his headset plugged into a phone extension there, listening attentively, nodding at an unheard voice. Every man's eyes were upon him as he spoke agreement, disconnected and turned slowly to face them. He savored the silent moment, then broke into the widest grin that any of them had ever seen on his normally expressionless face.

"This is it," the Sergeant said, and actually rubbed his hands together. "I can tell you now that the Edinburgers were expected and that our whole fleet is up in force. The scouts have detected them breaking out of jump space, and they should be here in about two hours. We're going out to meet them. This, you pinkie combat virgins, is it." A sound, like a low growl, rose from the assembled men, and the Sergeant's grin widened.

"That's the right spirit. Show some of it to the enemy." The grin vanished as quickly as it had come,

and, cold-faced as always, he called the ranks to attention.

"Corporal Steres is in sick bay with the fever so we're one NCO short. When that alert sounded we went into combat condition. I may now make temporary field appointments. I do so. Combatman Priego, one pace forward." Dom snapped to attention and stepped out of the rank.

"You're now in charge of the bomb squad. Do the right job and the CO will make it permanent. Corporal Priego, one step back and wait here. The rest of you to the ready room, double time — *march.*"

Sgt. Toth stepped aside as the combatmen hurried from the compartment. When the last one had gone he pointed his finger sharply at Dom.

"Just one word. You're as good as any man here. Better than most. You're smart. But you think too much about things that don't matter. Stop thinking and start fighting, or you'll never get back to that university. Bowb up, and if the Edinburgers don't get you I will. You come back as a corporal or you don't come back at all. Understood?"

"Understood." Dom's face was as coldly expressionless as the Sergeant's.

"I'm just as good a combatman as you are, Sergeant. I'll do my job."

"Then do it — now *jump.*"

Because of the delay, Dom was the last man to be suited up. The others were already doing their pressure checks with the armorers while he was still closing his seals. He did not let it disturb him or make him try to move faster. With slow deliberation, he counted off the check list as he sealed and locked.

Once all the pressure checks were in the green, Dom gave the armorers the thumbs-up okay and walked to the air lock. While the door closed behind him and the lock was pumped out, he checked all the telltales in his helmet. Oxygen, full. Power pack, full charge. Radio, one and one. Then the last of the air was gone, and the inner door opened soundlessly in the vacuum. He entered the armory.

The lights here were dimmer — and soon they would be turned off completely. Dom went to the rack with his equipment and began to buckle on the smaller items. Like all of the others on the bomb squad, his suit was lightly armored and he carried only the most essential weapons. The drillger went on his left thigh, just below his fingers, and the gropener in its holster on the outside of his right leg; this was his favorite weapon. The intelligence reports had stated that some of the Edinburgers still used fabric pressure suits so lightning prods — usually considered obsolete — had been issued. He slung his well to the rear, since the chance that he

might need it was very slim. All of these murderous devices had been stored in the evacuated and insulated compartment for months so that their temperature approached absolute zero. They were free of lubrication and had been designed to operate at this temperature.

A helmet clicked against Dom's, and Wing spoke, his voice carried by the conducting transparent ceramic.

"I'm ready for my bomb, Dom — do you want to sling it? And congratulations. Do I have to call you Corporal now?"

"Wait until we get back and it's official. I take Toth's word for absolutely nothing."

He slipped the first atomic bomb from the shelf, checked the telltales to see that they were all in the green, then slid it into the rack that was an integral part of Wing's suit. "All set, now we can sling mine."

They had just finished when a large man in bulky combat armor came up. Dom would have known him by his size even if he had not read HELMUTZ stenciled on the front of his suit.

"What is it, Helm?" he asked when their helmets touched.

"The Sergeant. He said I should report to you, that I'm lifting a bomb on this mission." There was an angry tone behind his words.

"Right. We'll fix you up with

a back sling." The big man did not look happy, and Dom thought he knew why. "And don't worry about missing any of the fighting. There'll be enough for everyone."

"I'm a combatman . . ."

"We're all combatmen. All working for one thing — to deliver the bombs. That's your job now."

Helmutz did not act convinced and stood with stolid immobility while they rigged the harness and bomb onto the back of his suit. Before they were finished, their headphones crackled and a stir went through the company of suited men as a message came over the command frequency.

"Are you suited and armed? Are you ready for illumination adjustment?"

"Combatmen suited and armed."

That was Sgt. Toth's voice.

"Bomb squad not ready," Dom said, and they hurried to make the last fastenings aware that the rest were waiting for them.

"Bomb squad suited and armed."

"Lights."

II

As the command rang out, the bulkhead lights faded out until the darkness was broken only by the dim red lights in the ceiling above. Until their eyes became adjusted, it was almost impossible to see. Dom groped his way to one of the benches, found the oxygen

hose with his fingers and plugged it into the side of his helmet; this would conserve his tank oxygen during the wait. Brisk music was being played over the command circuit now as part of morale sustaining. Here in the semidarkness, suited and armed, the waiting could soon become nerve-racking. Everything was done to alleviate the pressure. The music faded, and a voice replaced it.

"This is the executive officer speaking. I'm going to try and keep you in the picture as to what is happening up here. The Edinburgers are attacking in fleet strength and, soon after they were sighted, their ambassador declared that a state of war exists. He asks that Earth surrender at once or risk the consequences. Well, you all know what the answer to that one was. The Edinburgers have invaded and conquered twelve settled planets already and incorporated them into their Greater Celtic Co-prosperity Sphere. Now they're getting greedy and going for the big one — Earth itself, the planet their ancestors left a hundred generations ago. In doing this . . . Just a moment, I have a battle report here . . . first contact with our scouts."

The officer stopped for a moment, then his voice picked up again.

"Fleet strength, but no larger than we expected and we will be able to handle them. But there is

one difference in their tactics, and the combat computer is analyzing this now. They were the ones who originated the MT invasion technique, landing a number of cargo craft on a planet, all of them loaded with matter-transmitter screens. As you know, the invading forces attack through these screens direct from their planet to the one that is to be conquered. Well, they've changed their technique now. This entire fleet is protecting a *single* ship, a Kriger-class scout carrier. What this means . . . Hold on, here is the readout from the combat computer. *Only possibility single ship landing area increase MT screen breakthrough*, that's what it says. Which means that there is a good chance that this ship may be packing a *single* large MT screen, bigger than anything ever built before. If this is so — and they get the thing down to the surface — they can fly heavy bombers right through it, fire pre-aimed ICBM's, send through troop carriers, anything. If this happens the invasion will be successful."

Around him, in the red-lit darkness, Dom was aware of the other suited figures who stirred silently as they heard the words.

"If this happens." There was a ring of authority now in the executive officer's voice. "The Edinburghs have developed the only way to launch an interplanetary in-

vasion. We have found the way to stop it. You combatmen are the answer. They have now put all their eggs in one basket — and you are going to take that basket to pieces. You can get through where attack ships or missiles could not. We're closing fast now, and you will be called to combat stations soon. So — go out there and do your job. The fate of Earth rides with you."

Melodramatic words, Dom thought, yet they were true. Everything, the ships, the concentration of fire power, all depended on them. The alert alarm cut through his thoughts, and he snapped to attention.

"Disconnect oxygen. Fall out when your name is called and proceed to the firing room in the order called. Toth . . ."

The names were spoken quickly, and the combatmen moved out. At the entrance to the firing room a suited man with a red-globed light checked the name on their chests against his roster to make sure they were in the correct order. Everything moved smoothly, easily, just like a drill, because the endless drills had been designed to train them for just this moment. The firing room was familiar, though they had never been there before, because their trainer had been an exact duplicate of it. The combatman ahead of Dom went to port, so he moved to starboard. The man preceding him was just climbing into a

capsule, and Dom waited while the armorer helped him down into it and adjusted the armpit supports. Then it was his turn, and Dom slipped into the transparent plastic shell and settled against the seat as he seized the handgrips. The armorer pulled the supports hard up into his armpits, and he nodded when they seated right. A moment later, the man was gone, and he was alone in the semi-darkness with the dim red glow shining on the top ring of the capsule that was just above his head. There was a sudden shudder, and he gripped hard, just as the capsule started forward.

As it moved, it tilted backwards until he was lying on his back, looking up through the metal rings that banded his plastic shell. His capsule was moved sideways, jerked to a stop, then moved again. Now the gun was visible, a half dozen capsules ahead of his, and he thought, as he always did during training, how like an ancient quick-firing cannon the gun was — a cannon that fired human beings. Every two seconds, the charging mechanism seized a capsule from one of the alternate feed belts, whipped it to the rear of the gun where it instantly vanished into the breech. Then another and another. The one ahead of Dom disappeared and he braced himself — and the mechanism suddenly and for no apparent reason halted.

There was a flicker of fear that something had gone wrong with the complex gun, before he realized that all of the first combatmen had been launched and that the computer was waiting a determined period of time for them to prepare the way for the bomb squad. His squad now, the men he would lead.

Waiting was harder than moving as he looked at the black mouth of the breech. The computer would be ticking away the seconds now, while at the same time tracking the target and keeping the ship aimed to the correct trajectory. Once he was in the gun, the magnetic field would seize the rings that banded his capsule, and the linear accelerator of the gun would draw him up the evacuated tube that penetrated the entire length of the great ship from stern to bow. Faster and faster the magnetic fields would pull him until he left the mouth of the gun at the correct speed and on the correct trajectory to . . .

His capsule was whipped up in a tight arc and shoved into the darkness. Even as he gripped tight on the handholds, the pressure pads came up and hit him. He could not measure the time — he could not see and he could not breathe as the brutal acceleration pressed down on him. Hard, harder than anything he had ever experienced in training; he had that one thought, and then he was out of the gun.

In a single instant he went from acceleration to weightlessness, and he gripped hard so he would not float away from the capsule. There was a puff of vapor from the unheard explosions; he felt them through his feet, and the metal rings were blown in half, and the upper portion of the capsule shattered and hurled away. Now he was alone, weightless, holding to the grips that were fastened to the rocket unit beneath his feet. He looked about for the space battle that he knew was in progress and felt a slight disappointment that there was so little to see.

Something burned far off to his right, and there was a wavering in the brilliant points of the stars as some dark object occulted them and passed on. This was a battle of computers and instruments at great distances. There was very little for the unaided eye to see. The spaceships were black and swift and — for the most part — thousands of miles away. They were firing homing rockets and proximity shells, also just as swift and invisible. He knew that space around him was filled with signal jammers and false signal generators, but none of this was visible. Even the target vessel towards which he was rushing was invisible.

For all that his limited senses could tell, he was alone in space, motionless, forgotten.

Something shuddered against the soles of his boots, and a jet of vapor shot out and vanished from the rocket unit. No, he was neither motionless nor forgotten. The combat computer was still tracking the target ship and had detected some minute variation from its predicted path. At the same time, the computer was following the progress of his trajectory, and it made the slight correction for this new data. Corrections must be going out at the same time to all the other combatmen in space, before and behind him. They were small and invisible — doubly invisible now that the metal rings had been shed. There was no more than an eighth of a pound of metal dispersed through the plastics and ceramics of a combatman's equipment. Radar could never pick them out from among all the interference. They should get through.

Jets blasted again, and Dom saw that the stars were turning above his head. Touchdown soon; the tiny radar in his rocket unit had detected a mass ahead and had directed that he turned end for end. Once this was done he knew that the combat computer would cut free and turn control over to the tiny set-down computer that was part of his radar. His rockets blasted, strong now, punching the supports up against

him, and he looked down past his feet at the growing dark shape that occulted the stars.

With a roar, loud in the silence, his headphones burst into life.

"Went, went — gone hungry. Went, went — gone hungry."

The silence grew again, but in it Dom no longer felt alone. The brief message had told him a lot.

Firstly, it was Sergeant Toth's voice; there was no mistaking that. Secondly, the mere act of breaking radio silence showed that they had engaged the enemy and that their presence was known. The code was a simple one that would be meaningless to anyone outside their company. Translated, it said that fighting was still going on but the advance squads were holding their own. They had captured the center section of the hull — always the best place to rendezvous since it was impossible to tell bow from stern in the darkness — and were holding it, awaiting the arrival of the bomb squad. The retrorockets flared hard and long, and the rocket unit crashed sharply into the black hull. Dom jumped free and rolled.

III

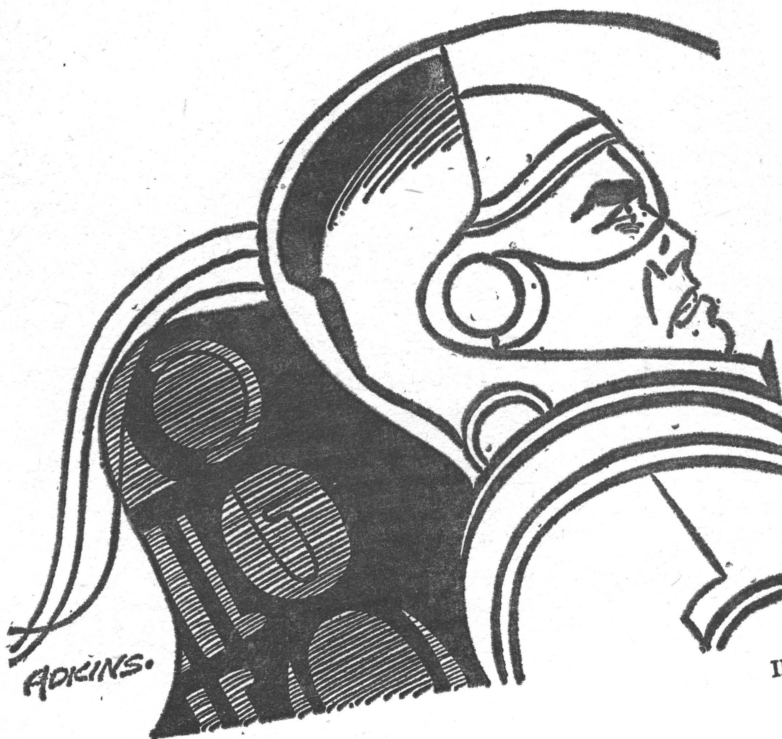
As he came out of the roll, he saw a suited figure looming above him, clearly outlined by the disk of the sun despite his black nonreflective armor. The top of

the helmet was smooth. Even as he realized this, Dom was pulling the gropener from its holster.

A cloud of vapor sprang out, and the man vanished behind it. Dom was surprised, but he did not hesitate. Handguns, even recoilless ones like this that sent the burnt gas out to the sides, were a hazard in no-G space combat. Guns were not only difficult to aim but either had a recoil that would throw the user back out of position or the gas had to be vented sideways, when they would blind the user for vital moments. A fraction of a second was all a trained combatman needed.

As the gropener swung free, Dom thumbed the jet button lightly. The device was shaped like a short sword, but it had a vibrating saw blade where one sharpened edge should be, with small jets mounted opposite it in place of the other edge. The jets drove the device forward, pulling him after it. As soon as it touched the other man's leg, he pushed the jets full on. As the vibrating ceramic blade speeded up, the force of the jets pressed it into the thin armor.

In less than a second, it had cut its way through and on into the flesh of the leg inside. Dom pressed the reverse jet to pull away as vapor gushed out, condensing to ice particles instantly, and his opponent writhed, clutch-





ed at his thigh — then went suddenly limp.

Dom's feet touched the hull, and the soles adhered. He realized that the entire action had taken place in the time it took him to straighten out from his roll and stand up . . .

Don't think, act. Training. As soon as his feet adhered, he crouched and turned, looking about him. A heavy power ax sliced by just above his head, towing its wielder after it.

Act, don't think. His new opponent was on his left side, away from the gropener, and was already reversing the direction of his ax. A man has two hands. The drillger on his left thigh! Even as he remembered it, he had it in his hand, drill on and hilt-jet flaring. The foot-long, diamond-hard drill spun fiercely — its rotation cancelled by the counter-revolving weight in the hilt — while the jet drove it forward.

It went into the Edinburger's midriff, scarcely slowing as it tore a hole in the armor and plunged inside. As his opponent folded, Dom thumbed the reverse jet to push the drillger out. The power ax, still with momentum from the last blast of its jet, tore free of the dying man's hand and vanished into space.

There were no other enemies in sight. Dom tilted forward on

one toe so that the surface film on the boot sole was switched from adhesive to neutral, then he stepped forward slowly. Walking like this took practice, but he had had that. Ahead was a group of dark figures lying prone on the hull, and he took the precaution of raising his hand to touch the horn on the top of his helmet so there would be no mistakes. This identification had been agreed upon just a few days ago and the plastic spikes glued on. The Edinburgers all had smooth-topped helmets.

Dom dived forward between the scattered forms and slid, face down. Before his body could rebound from the hull, he switched on his belly-sticker, and the surface film there held him flat. Secure for the moment among his own men, he thumbed the side of his helmet to change frequencies. There was now a jumble of noise through most of the frequencies, messages — both theirs and the enemy's — jamming, the false messages being broadcast by recorder units to cover the real exchange of information. There was scarcely any traffic on the bomb-squad frequency, and he waited for a clear spot. His men would have heard Toth's message, so they knew where to gather. Now he could bring them to him.

"Quasar, quasar, quasar," he called, then counted carefully for ten seconds before he switched on

the blue bulb on his shoulder. He stood as he did this, let it burn for a single second, then dropped back to the hull before he could draw any fire. His men would be looking for the light and would assemble on it. One by one they began to crawl out of the darkness. He counted them as they appeared. A combatman, without the bulge of a bomb on his back, ran up and dived and slid, so that his helmet touched Dom's.

"How many, Corporal?" Toth's voice asked.

"One still missing but . . ."

"No buts. We move now. Set your charge and blow as soon as you have cover."

He was gone before Dom could answer. But he was right. They could not afford to wait for one man and risk the entire operation. Unless they moved soon, they would be trapped and killed up here. Individual combats were still going on about the hull, but it would not be long before the Edinburghers realized these were just holding actions and that the main force of attackers was gathered in strength. The bomb squad went swiftly and skillfully to work laying the ring of shaped charges.

The rear guards must have been called in, because the heavy weapons opened fire suddenly on all sides. These were .30 calibre high-velocity recoilless machine

guns. Before firing, the gunners had traversed the hull, aiming for a grazing fire that was as close to the surface as possible. The gun computer remembered this and now fired along the selected pattern, aiming automatically. This was needed because, as soon as the firing began, clouds of gas jetted out, obscuring everything. Sgt. Toth appeared out of the smoke and shouted as his helmet touched Dom's.

"Haven't you blown it yet?"

"Ready now, get back."

"Make it fast. They're all down or dead now out there. But they will throw something heavy into this smoke soon, now that they have us pinpointed."

The bomb squad drew back, fell flat, and Dom pressed the igniter. Flames and gas exploded high, while the hull hammered up at them. Through the smoke rushed up a solid column of air, clouding and freezing into tiny crystals as it hit the vacuum. The ship was breached now, and they would keep it that way, blowing open the sealed compartments and bulkheads to let out the atmosphere. Dom and the Sergeant wriggled through the smoke together, to the edge of the wide, gaping hole that had been blasted in the ship's skin.

"Hotside, hotside!" the Sergeant shouted, and dived through the opening.

Dom pushed away through the

rush of men who were following the Sergeant and assembled his squad. He was still one man short. A weapons man with his machine gun on his back hurried by and leapt into the hole, with his ammunition carriers right behind him. The smoke cloud was growing because some of the guns were still firing, acting as a rear guard. It was getting hard to see the opening now. When Dom had estimated that half the men had gone through, he led his own squad forward.

They pushed down into a darkened compartment, a storeroom of some kind, and saw a combatman at a hole about 100 yards from here," he said as soon as Dom's helmet touched his. "We tried to the right first but there's too much resistance. Just holding them there."

Dom led his men in a floating run, the fastest movement possible in a null-G situation. The corridor was empty for the moment, dimly lit by the emergency bulbs. Holes had been blasted in the walls at regular intervals, to open the sealed compartments and empty them of air, as well as to destroy wiring and piping. As they passed one of the ragged-edged openings, spacesuited men erupted from it.

Dom dived under the thrust of a drillger, swinging his gropener

out at the same time. It caught his attacker in the midriff, just as the man's other hand came up. The Edinburger folded and died, and a sharp pain lanced through Dom's leg. He looked down at the nipoff that was fastened to his calf and was slowly severing it.

The nipoff was an outmoded design for use against unarmored suits. It was killing him. The two curved blades were locked around his leg, and the tiny, geared-down motor was slowly closing them. Once started, the device could not be stopped.

It could be destroyed. Even as he realized this, he swung down his gropener and jammed it against the nipoff's handle. The pain intensified at the sideways pressure, and he almost blacked out. He attempted to ignore it. Vapor puffed out around the blades, and he triggered the compression ring on his thigh that sealed the leg from the rest of the suit. Then the gropener cut through the casing. There was a burst of sparks, and the motion of the closing of the blades stopped.

When Dom looked up, the brief battle was over and the counterattackers were dead. The rear guard had caught up and pushed over them. Helmutz must have accounted for more than one of them himself. He held his power ax high, fingers just touching the buttons in the haft so that the jets above

the blade spurted alternately to swing the ax to and fro. There was blood on both blades.

IV

Dom switched on his radio; it was silent on all bands. The interior communication circuits of the ship were knocked out here, and the metal walls damped all radio signals.

"Report," he said. "How many did we lose?"

"You're hurt," Wing said bending over him. "Want me to pull that thing off?"

"Leave it. The tips of the blades are almost touching, and you'd tear half my leg off. It's frozen in with the blood, and I can still get around. Lift me up."

The leg was getting numb now, with the blood supply cut off and the air replaced by vacuum. That was all for the best. He took the roll count.

"We've lost two men but we still have more than enough bombs for this job. Now let's move."

Sgt. Toth himself was waiting at the next corridor, where another hole had been blasted in the deck. He looked at Dom's leg but said nothing.

"How is it going?" Dom asked.

"Fair. We took some losses. We gave them more. Engineer says we are over the main hold now, so we are going straight down, pushing

out men on each level to hold. Get going."

"And you?"

"I'll bring down the rear guard and pull the men from each level as we pass. You see that you have a way out for us when we all get down to you."

"You can count on that."

Dom floated out over the hole, then gave a strong kick with his good leg against the ceiling when he was lined up. He went down smoothly, and his squad followed. They passed one deck, two, then three. The openings had been nicely aligned for a straight drop. There was a flare of light and a burst of smoke ahead as another deck was blown through. Helmutz passed Dom, going faster, having pushed off harder with both legs. He was a full deck ahead when he plunged through the next opening, and the burst of high velocity machine gun fire almost cut him in two. He folded in the middle, dead in the instant, the impact of the bullets driving him sideways and out of sight in the deck below.

Dom thumbed the jets on the gropener, and it pulled him aside before he followed the combatman.

"Bomb squad, disperse," he ordered. "Troops coming through." He switched to the combat frequency and looked up at the ragged column of men dropping down towards him.

"The deck below had been retak-

en. I am at the last occupied deck.”

He waved his hand to indicate who was talking, and the stream of men began to jet their weapons and move on by him. “They’re below me. The bullets came from this side.” The combatman pushed on without a word.

The metal flooring shook as another opening was blasted somewhere behind him. The continuous string of men moved by. A few seconds later a helmeted figure — with a horned helmet — appeared below and waved the all-clear. The drop continued.

On the bottom deck, the men were all jammed almost shoulder to shoulder, and more were arriving all the time.

“Bomb squad here, give me a report,” Dom radioed. A combatman with a napboard slung at his waist pushed back out of the crowd.

“We reached the cargo hold — it’s immense — but we’re being pushed back. Just by weight of numbers. The Edinburgers are desperate. They are putting men through the MT screen in light pressure suits. Unarmored, almost unarmed. We kill them easily enough but they have pushed us out bodily. They’re coming right from the invasion planet. Even when we kill them, the bodies block the way . . .”

“You the engineer?”

“Yes.”

“Whereabouts in the hold is the MT screen?”

“It runs the length of the hold and is back against the far wall.”

“Controls?”

“On the left side.”

“Can you lead us over or around the hold so we can break in near the screen?”

The engineer took a single look at charts.

“Yes, around. Through the engine room. We can blast through close to the controls.”

“Let’s go then.” Dom switched to combat frequency and waved his arm over his head. “All combatmen who can see me — this way. We’re going to make a flank attack.”

They moved down the long corridor as fast as they could, with the combatmen ranging out ahead of the bomb squad. There were sealed pressure doors at regular intervals, but these were bypassed by blasting through the bulkheads at the side. There was resistance and there were more dead as they advanced — from both sides. Then a group of men gathered ahead, and Dom floated up to the greatly depleted force of combatmen who had forced their way this far. A corporal touched his helmet to Dom’s pointing to a great sealed door at the corridor’s end.

“The engine room is behind there. These walls are thick. Everyone off to one side, because we must use an octupled charge.”

They dispersed, and the bulkheads heaved and buckled when the charge exploded. Dom, looking towards the corridor, saw a sheet of flame sear by, followed by a column of air that turned instantly to sparkling granules of ice. The engineroom had still been pressurized.

There had been no warning, and most of the crewmen had not had their helmets sealed. They were violently and suddenly dead. The few survivors were killed quickly when they offered resistance with improvised weapons. Dom scarcely noticed this as he led his bomb squad after the engineer.

"That doorway is not on my charts," the engineer said, angrily, as though the spy who had stolen the information was at fault. "It must have been added after construction."

"Where does it go to?" Dom asked.

"The MT hold, no other place is possible."

Dom thought quickly. "I'm going to try and get to the MT controls without fighting. I need a volunteer to go with me. If we remove identification and wear Edinburger equipment we should be able to do it."

"I'll join you," the engineer said.

"No, you have a different job. I want a good combatman."

"Me," a man said, pushing

through the others. "Pimenov, best in my squad. Ask anybody."

"Let's make this fast."

The disguise was simple. With the identifying spike knocked off their helmets and enemy equipment slung about them, they would pass any casual examination. A handful of grease obscured the names on their chests.

"Stay close behind and come fast when I knock the screen out," Dom told the others, then led the combatman through the door.

There was a narrow passageway between large tanks and another door at the far end. It was made of light metal but was blocked by a press of human bodies, spacesuited men who stirred and struggled but scarcely moved. The two combatmen pushed harder, and a sudden movement of the mob released the pressure; Dom fell forward, his helmet banging into that of the nearest man.

"What the devil you about?" the man said, twisting his head to look at Dom.

"More of them down there," Dom said, trying to roll his R's the way the Edinburgers did.

"You're no one of us!" the man said and struggled to bring his weapon up.

Dom could not risk a fight here—yet the man had to be silenced. He was wearing a thin spacesuit. Dom could just reach the lightning prod, and he jerked it from its

clip and jammed it against the Edinburger's side. The pair of needle-sharp spikes pierced suit and clothes and bit into his flesh, and when the hilt slammed against his body the circuit was closed. The handle of the lightning prod was filled with powerful capacitors that released their stored electricity in a single immense charge through the needles. The Edinburger writhed and died instantly.

They used his body to push a way into the crowd.

Dom had just enough sensation left in his injured leg to be aware when the clamped-on nippoff was twisted in his flesh by the men about them; he kept his thoughts from what it was doing to his leg.

V

Once the Edinburger soldiers were aware of the open door, they pulled it wide and fought their way through it. The combatmen would be waiting for them in the engine room. The sudden exodus relieved the pressure of the bodies for a moment, and Dom, with Pimenov struggling after him, pushed and worked his way toward the MT controls.

It was like trying to move in a dream. The dark hulk of the MT screen was no more than ten yards away, yet they couldn't seem to reach it. Soldiers sprang from the screen, pushing and crowding in,

more and more, preventing any motion in that direction. The technicians stood at the controls, their helmet phones plugged into the board before them. Without gravity to push against, jammed into the crowd that floated at all levels in a fierce tangle of arms and legs, movement was almost impossible. Pimenov touched his helmet to Dom's.

"I'm going ahead to cut a path. Stay close behind me."

He broke contact before Dom could answer him and let his power ax pull him forward into the press. Then he began to chop it back and forth in a short arc, almost hacking his way through the packed bodies. Men turned on him, but he did not stop, lashing out with his gropener as they tried to fight. Dom followed.

They were close to the MT controls before the combatman was buried under a crowd of stabbing, cursing Edinburgers. Pimenov had done his job, and he died doing it. Dom jettied his gropener and let it drag him forward until he slammed into the thick steel frame of the MT screen above the operators' heads. He slid the weapon along the frame, dragging himself head-first through the press of suited bodies. There was a relatively clear space near the controls. He drifted down into it and let his drillger slide into the operator's back. The man writhed and died

quickly. The other operator turned and took the weapon in his stomach. His face was just before Dom as his eyes widened and he screamed soundlessly with pain and fear. Dom could not escape the dead, horrified features as he struggled to drop the atomic bomb from his carrier. The murdered man stayed, pressed close against him all the time.

Now!

He cradled the bomb against his chest and, in a single swift motion, pulled out the arming pin, twisted the fuse to five seconds, and slammed down hard on the actuator. Then he reached up and switched the MT from *receive* to *send*.

The last soldiers erupted from the screen, and there was a growing gap behind them. Into this space and through the screen Dom threw the bomb.

After that, he kept the switch down and tried not to think about what was happening among the men of the invasion army who were waiting before the MT screen on that distant planet.

Then he had to hold this position until the combatmen arrived. He sheltered behind the operator's corpse and used his drillger against the few Edinburgers who were close enough to realize that something had gone wrong. This was easy enough to do because, al-

though they were soldiers, they were men from the invasion regular army and knew nothing about null-G combat. Very soon after this, there was a great stir, and the closest ones were thrust aside. An angry combatman blasted through, sweeping his power ax towards Dom's neck. Dom dodged the blow and switched his radio to combat frequency.

"Hold that! I'm Corporal Priego, bomb squad. Get in front of me and keep anyone else from making the same mistake."

The man was one of those who had taken the engine room. He recognized Dom now and nodded, turning his back to him and pressing against him. More combatmen stormed up to form an iron shield around the controls. The engineer pushed through between them, and Dom helped him reset the frequency on the MT screen.

After this, the battle became a slaughter and soon ended.

"Sendout!" Dom radioed as soon as the setting was made, then turned the screen to transmit. He heard the words repeated over and over as the combatmen repeated the withdrawal signal so that everyone could hear it. Safety lay on the other side of the screen, now that it was tuned to Tycho Barracks on the Moon.

It was the Edinburgers, living, dead and wounded who were sent through first. They were pushed

back against the screen to make room for the combatmen who were streaming into the hold. The ones at the ends of the screen simply bounced against the hard surface and recoiled; the receiving screen at Tycho was far smaller than this great invasion screen. They were pushed along until they fell through, and combatmen took up positions to mark the limits of operating screen.

Dom was aware of someone in front of him, and he had to blink away the red film that was trying to cover his eyes.

"Wing," he said, finally recognizing the man. "How many others of the bomb squad made it?"

"None I know of, Dom. Just me."

No, don't think about the dead! Only the living counted now.

"All right. Leave your bomb here and get on through. One is all we really need." He tripped the release and pulled the bomb from Wing's rack before giving him a push towards the screen.

Dom had the bomb clamped to the controls when Sergeant Toth slammed up beside him and touched helmets.

"Almost done."

"Done now," Dom setting the fuse and pulling out the arming pin.

"Then get moving. I'll take it from here."

"No you don't. My job." He had to shake his head to make the haze go away but it still remained at the corners of his vision.

Toth didn't argue. "What's the setting?" he asked.

"Five and six. Five seconds after actuation the chemical bomb blows and knocks out the controls. One second later the atom bomb goes off."

"I'll stay around I think to watch the fun."

Time was acting strangely for Dom, speeding up and slowing down. Men were hurrying by, into the screen, first in a rush, then fewer and fewer. Toth was talking on the combat frequency, but Dom had switched the radio off because it hurt his head. The great chamber was empty now of all but the dead, with the automatic machine guns left firing at the entrances. One of them blew up as Toth touched helmets.

"They're all through. Let's go."

Dom had difficulty talking, so he nodded instead and hammered his fist down onto the actuator.

Men were coming towards them, but Toth had his arms around him, and full jets on his power ax were sliding them along the surface of the screen. And through.

When the brilliant lights of Tycho Barracks hit his eyes, Dom closed them, and this time the red haze came up, over him, all the way.

“How’s the new leg?” Sergeant Toth asked. He slumped lazily in the chair beside the hospital bed.

“I can’t feel a thing. Nerve channels blocked until it grows tight to the stump.” Dom put aside the book he had been reading and wondered what Toth was doing here.

“I come around to see the wounded,” the Sergeant said, answering the unasked question. “Two more besides you. Captain told me to.”

“The Captain is as big a sadist as you are. Aren’t we sick enough already?”

“Good joke.” His expression did not change. “I’ll tell the Captain. He’ll like it. You going to buy out now?”

“Why not? Dom wondered why the question made him angry. “I’ve had a combat mission, the medals, a good wound. More than enough points to get my discharge.”

“Stay in. You’re a good combatman when you stop thinking about it. There’s not many of them. Make it a career.”

“Like you, Sergeant? Make killing my life’s work? Thank you, no. I intend to do something different, a little more constructive. Unlike you, I don’t relish this whole dirty business, the killing, the outright plain murder. You like it.” This sudden thought sent him sitting upright in the bed. “Maybe that’s

it. Wars, fighting, everything. It has nothing to do any more with territory rights or aggression or masculinity. I think that you people make wars because of the excitement of it, the thrill that nothing else can equal. You really *like* war.”

Toth rose, stretched easily and turned to leave. He stopped at the door, frowning in thought.

“Maybe you’re right, Corporal. I don’t think about it much. Maybe I do like it.” His face lifted in a cold tight smile. “But don’t forget — *you like it too.*”

Dom went back to his book, resentful of the intrusion. His literature professor had sent it, along with a flattering note. He had heard about Dom on the broadcasts, and the entire school was proud, and so on. A book of poems by Milton, really good stuff.

*No war, or battle’s sound
Was heard the world around.*

Yes, great stuff. But it hadn’t been true in Milton’s day and it still wasn’t true. ‘Did mankind really like war? They *must* like it or it wouldn’t have lasted so long. This was an awful, criminal thought.

He too? Nonsense. He fought well, but he had trained himself. It would not be true that he actually liked all of that.

Dom tried to read again, but the page kept blurring before his eyes.

END



PUPA KNOWS BEST

by JAMES TIPTREE, JR.

After the first two alien contacts, Earth got used to alienation. The Siggies were cute, anyhow, and they brought the most ancient of gifts.

Illustrated by *Brand*

I

“Here we go again,” said Harry’s voice in my ear.

I discovered my wife had waked up first and was holding the office phone over my face. It was still dark.

“ — Down by the Lunar Alps. Photos just coming in.”

“Not those Capellan witches again?” I groaned.

“Smaller. Different emission features. Get down here, Max.”

Tillie was already dressing. When we’d gone to bed two hours back, the ears of earth were following a moving source which kept disappearing behind Luna, and our moonstation near Mersenius was scram-

bling to set up a far-side relay. Now the alien had landed, a third of a great circle from our station.

The photo courier passed us at the office door. Mersenius had sent a camera-eye over the alien ship.

"Looks as if they're interested in those ore-piles the Capellans left," said George. "What's that, a der-rick?"

"Derrick my azimuth," I grunted, rapidly opening and closing alternate eyes to catch small differences in consecutive negatives. That's called flashing. Big photo-shops do it with a trunk-sized geewhizzus that's about half as efficient as the trained human eye.

"That's them. It. He. He is moving an arm . . . He is shifting his stance . . . Bipedal? Maybe, if that's a tail. Yes! He is moving his tail. What did we have for the height of that ore-pile?"

"Forty-one meters." Little Mrs. Peabody had joined us, alert and dedicated.

"Tentative estimate, six meters tall," I concluded. "We'll see what Langley says in the morning; they've got better comparators. And not huuman. Let me project this shadow — if it straightened up, it would look something like a small Tyrannosaurus, wouldn't you say?"

The spy-eye gave us a close-up on its second pass, just before the alien knocked it down. We saw a lizard-like creature, helmeted and harnessed with weird hardware,



R. Brand

wearing an unpleasant expression on its lipless face. And blue.

"Eighteen-foot blue space-going dinosaurs, that's what's up there," said Harry. "At least two of them."

"Or praying mantises," said George.

"Maybe he's a she," said Tillie.

"Quit dreaming, kid," I told her.

"The lulu is played only once in a lifetime."

By this time, the main photo-shop had confirmed my height guess and added that the two aliens had pulled the spy-eye in with some sort of beam and then apparently cut it open for a brief look before blowing the remains.

Meanwhile the hot-lines of the world were steaming, and the United Powers halls were boiling with delegates trying to get a decision on what to tell Mersenius to do. So many electric razors were used in the UnPo lounge that they blew a fuse and killed our landline for fifteen minutes. At 0800 EST the question became academic. The aliens took off on a fast-precressing orbit around Terra itself.

So far they had been silent. Now they began to transmit, and George ascended to his idea of Heaven with an endless supply of alien gabble to chew on.

What exactly is our shop? Basically, an unimportant bit of C.I.A. that got left out in the big move to Langley. (I warned you

this would be the inside story from the pick-and-shovel level; I couldn't know less about what the President said to the Premier.) We're officially listed as a communications and special support facility. Just a small crew of oddball linguists and blown operators put out to pasture. It was a nice restful life until we accidentally got into the first great alien contact flap three years back. The Capellans, you'll recall. George came out of that as our official Extraterrestrial Language Specialist, which hasn't done his small-man's ego any good. I am optimistically regarded as having a flare for alien psychology — shows you what can happen to a fair photointerpreter. Tillie is a crack polyglot. Did you know you get clobbered for calling a polyglot a linguist? Anyway, she's George's aide. And my wife. Harry is our captive physicist-of-all-work since they decided we rated an R&D. And Mrs. Peabody got upgraded to Chief of Archives, but she still does my income-tax forms.

After the Girls from Capella left hurriedly, we all expected to coast into distinguished retirement with no further calls on our peculiar talents, if any. Now suddenly here was Another Alien merrily orbiting Terra, and our little shop was being pelted with data and demands for answers.

"They appear to be sending some sort of standard contact broadcast," George reported. "Three or four

phrases repeated, and switch to a different language. At least twenty-eight so far. One of them resembles Capellan, but not enough to read."

"I think it's like a high Capellan," said Tillie. "You know, like Mandarin to Cantonese. The Capellans who came here must have spoken a dialect. I'm sure I heard a formal *I* and *you* and something about *speak*."

"Could it be *Do you speak our language? Or Will you speak?*"

The United Powers were now in hot debate as to whether and what to reply to the alien. George could scarcely be prevented from trying to pull something through his friends at the Voice; he was sweating for fear the Swedes or Chicoms would beat us to it. But we couldn't get an okay. That was the time our Joint Chiefs were so cozy with the President — remember? — and I think there was a struggle to keep them from testing their new anti-orbital-missile missile on the aliens. It may have been the same elsewhere; the big nations had all been working up their space defense since the Capellan visit.

The upshot was that nobody did anything before the alien abruptly stopped transmitting speech and went into repeated da-dits. That lasted an hour. Then two things happened right together. First, Harry got a signal from Defense R&D that one of their boys had identified a digital equation having

to do with fissionable elements in the da-dits. Right after that was the word from a Soviet tracker that the alien had ejected an object which was now trailing their ship.

We all ducked and held our breaths.

The blip stayed in orbit.

Just as we started breathing again, the alien poked out a laser finger and the trailing blip went up in the prettiest fusion flare you ever saw — a complex burst, like three shorts and a long.

This is probably where you came in. With that flare overhead, the world media roared out of control. "ALIENS BLAST EARTH!" "BLUE LIZARDS HURL BOMB FROM SKY!" The military was already loose, of course, and an assortment of mega-squibs were blasting up towards the alien ship.

They never connected. The alien deftly distributed three more blips in a pattern around earth, about 150,000 miles out, and took off in the direction of the Coal Sack. They had been in our system exactly thirteen hours, during which the united brains of earth had demonstrated all the initiative of a shocked opossum.

"Call me anthropocentric, but they struck me as ugly customers," I brooded later.

"And very alien," said Tillie.

"You're supposed to be able to identify, remember?"

She gave me the old sulky leer, with the new magic ingredient.

"Marriage has ruined you, kid . . . Hey, George! Did you hear that those bombs they left are covered with writing? About a zillion different scripts, in a nice fluorescent blue. It's your life work, old brother."

"A Galactic Rosetta stone," breathed George as he sat down. "Max, you've got to keep the military from destroying them. The photos are not adequate."

"Three time-bombs going past our ears on the hour, and you want to preserve them as a reference library? What if they're loaded with disease? Or mutation inducers? Stupid-making generators, so we won't get into space? Have you heard the newscasts? George, sober up."

"They can't," he groaned. "It's priceless! The key to the Galaxy!"

As it turned out, they didn't, at least not then. Somebody was either too scared, or too avid for alien technology. A US-Soviet astroteam managed to make a remote-control dock with one of the ten-foot missiles and spent a week gingerly coaxing it around to a crater on the far side of Luna. From that minute, George lived to get to the moon. To my amazement, he screamed the medicos into an acceleration and low-G clearance, and next thing we knew he was actually booked for the Mersenius shuttle trip. In spite

of looking like a dissipated mouse, George was fundamentally pretty healthy.

At the good-bye party he told me he felt sure he had detected Capellan script on the missile's fin.

"Same as the verbal transmission — something about *I you speak*."

"How about: *If you can read this you're too damn close*? Good luck."

II

So that was how we came to be short of George when Alien No. 2 came along. (Or No. 3, if you count from the Capellans.) You know most of the story here. The new boys followed the same routine as the lizards: A couple of passes over Luna, pause to inspect the ore-piles, and then into orbit and start to transmit. There was a diversion when they spotted the two flying bombs. They quit transmitting and, while the world watched, they sneaked up behind one of the blips. There was no laser probe. Instead, we saw some sort of fog drift out of the newcomer's ship and envelope the blip.

"They've melted it!" Harry yelled on the intercom. When the fog moved on, we could all see the blip was gone. The aliens were heading for the other.

"NEW ALIENS CLEAR BOMBS FROM SKY!" "MENACE FROM SPACE DESTROYED!" Remember?

With the second bomb gone, our new pals resumed transmission. Tillie was out acting chief linguist.

"What'll I do, Max? George won't acknowledge his orders to return!"

"You can do it, girl. What's so hard about little stick figures? Read it like a comic strip."

"Did you ever try saying *Who are you?* or *Where do you come from?* in little stick figures?" she asked bitterly.

But they did look humanoid and peaceful enough. One sketch they kept repeating showed a mixture of big and little figures dancing around a maypole affair.

"The little figures seem to be them, and the big ones are us," said Tillie.

"You hope. And this one means they want to land, right?"

You'll recall we let them come down in a burnt-over wilderness area in Northern Quebec. No aloha-parties like we gave the Girls from Capella. No official grandstand. Just an empty plain, a sky full of contrails, and five different brands of overkill zeroed in on that big golden ship as it settled.

The air-lock opened.

Everyone remembers what marched out into that empty plain — a band of little figures about four feet high and the color of the More Expensive Spread. They seemed to be wearing jointed golden armor with funny little half-opened helmets on their heads. They were

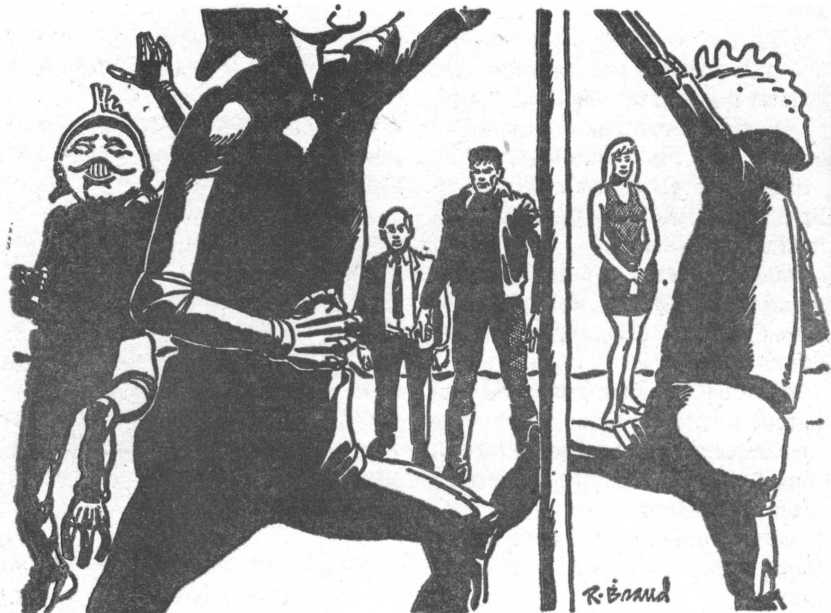
carrying what looked like cereal-box death-ray guns. Each one held his up and then gravely trooped over and dropped his weapon on a pile. Then they joined hands and began to sing.

This was the world's first taste of what came to be known as the Sound from Cygnus. It wasn't really too different from a musical saw to me, but you know how it caught on. Oh my earmuffs, did it catch on! That's right, you had teen-aged kids. The thing hadn't been zingling through our office a minute before I saw La Peabody starting to twitch.

While we absorbed the Sound, a second band of little butter-boys marched out of the ship carrying a globe on a pole. The distant trigger-fingers tightened. But all they did was to set it up in the center, like the maypole in their sketches, and sing harder. Then they shut up, bowed deeply and just stood there. Waiting for someone to say Hello.

It wasn't long before a reception committee crawled out of the bunkers and the second alien contact got underway.

Quite a relief after the previous hoopla. This one went more like grown up. No sex. No nuclear fireworks. Just a mob of decorous little yellow squirts earnestly interested in learning our languages and customs. Their chief concern seem-



ed to be to avoid getting poisoned by our food. Did you know they were vegetarians? They answered everything we asked as well as they could. Their home system was quickly identified as Cygnus 61. The death-ray pistols were lasers; they passed out samples. They made no more objection to electronic surveillance than a herd of Guernseys, and they let us into the ship with anything we wanted to bring. Harry was in on that.

"Same general thing as the Cappellans," he reported. "And fairly old. They seem to have bought it second-hand from somewhere. Two auxiliary flyers on board. No major weapons we can find aside from small small standard missiles and

that particle-fog thing. That looks to be a catalyst effect."

"What makes you think they didn't build it?"

"Every time we ask a technical question they drag out a manual to look up the answer. They ended by giving us the whole set to copy. I brought back the lot. Where's George?"

"He won't answer. What's one language when he has hundreds? He's up there with his Rosetta stone, and I doubt he'll budge till his oxygen runs out."

"Funny thing," Harry mused. "They have this maypole thing all over the ship, in different sizes. One big room looks exactly like a chapel. I believe they're deeply religious."

Just in time, I recalled that Harry himself was deeply religious.

And of course, that was the big news about our visitors. Until the religious angle came out, the Siggies threatened to be about as newsworthy as an agronomists' convention. When the official tours got started it was quickly realized that the Sound was hymns. You remember the pictures — circles of little yellow fellows setting up their maypoles at dawn, noon and sunset, wherever they happened to be, joining hands and singing and beckoning the bystanders to join in. With that Sound and their appealing appearance, they got a lot of takers, especially with the young people. This seemed to delight them. "You comp? You comp?" they would call. "Good! You glike? Good?" they would ask, peering up into the human faces around them when the song was over. When people smiled back, the Siggies would grab their hands and squeeze. Their hands were cool and felt fragile. "Like a child's hands in paper gloves," one woman said.

"I do think they're sweet," Mrs. Peabody confessed. "Those little brown button eyes peering out."

"Reminds me of Hobbits," said Tillie. "Meriadoc in armor."

"It's not armor, it's an exoskeleton," I told her. "It doesn't come off."

"I know — but listen, they're going to sing."

By now, we knew that the object on top of the poles was not a globe. It was roughly egg-shaped, with interior creases.

"Like a bagel," said Mrs. Peabody.

"They call it something like the Pupa, or the Great Pupa," said Tillie. "It represents a Cygnian wrapped up like a cocoon. See the face?"

"Looks sad," said Harry.

There was a note of sadness in the songs, too, sadness and exaltation, which added immensely to the appeal. The recording companies knew a good thing when it fell on their heads, and the Sound rapidly became a menace on the radio bands. Rapa had three kids and told me he had smashed his set to stay sane. Well, you know all about this, those first weeks with the Siggies touring around and singing in front of churches and mosques and temples, and the Unitarian minister coming out to hold joint services in the open air, and the kids wearing maypole buttons and Great Pupa buttons and all the rest. Hands Across the Galaxy. Oekoumene! What you still don't know about is S'serrrop. (We spelled it that way to indicate a hard buzzing r-r-r. The Cygnians were strong on stops and clicks, but had trouble with our nasals and semi-vowels — I quote from Tillie.)

S'serrrop came to us when the

West Hemisphere Cygnian party first went through D.C. We met him at the official mass reception—an indefinably tatty-looking Cygnian, somewhat pale in color. He was one of their many language students, and he and Tillie went into a fast huddle. We had our chief ask for him to stay behind when the tour moved on; and for a wonder we got him, after State had been practically in bed with the party for a week. The Siggies jumped at any chance to learn our languages. I guess they were surprised at the number.

The thing about S'serrrop was that he was different. A marginal Cygnian, if you like. We never found out why. How could you evaluate aberrant factors in an arthropod's childhood? Anyway, he gave us some new insights. The first was about Siggie emotion.

Remember how they always looked so sort of neat and merry? Well, S'serrrop disabused us of that the day he tried to join us eating meat. He was yellower than usual when George was ordering the usual salad for him at Rapa's.

"Gno!" clicked S'serrrop. "I eat samp as hew!"

His yellow color grew richer while he rejected our protests. When the meatballs arrived, we saw the crisis. You know that crest of tiddly bits sticking out above the Cygnian visor was actually their chemoreceptors and part of their ears? At

sight of the meat, S'serrrop's receptors began to retreat until his "helmet" was a smooth round sphere. He took a mouthful, chomped once, and looked wildly about. The gesture was so human I was on my feet ready to help our visitor from space to Rapa's can. But he had swallowed and sat there breathing hard: Stern stuff, S'serrrop. Tillie snatched up his plate and substituted greens, and after awhile his crest came back out.

That gave us the clue. There was a Siggie song-fest near the Mormon Temple in Salt Lake City on the screen that night.

"Max!" Tillie gasped, "Look at their heads!"

Every one of them was as bare and round as a billiard-ball. And they were glowing like hot butter.

"Intense fear, disgust, revulsion . . . Funny emotions for a quiet party of space-going sociologists."

"I'll ask S'serrrop."

"Very carefully. Very, very carefully."

Oddly enough, it was Harry who did the job. We discovered he had been mixing quite a lot of religious discussion in with the particle physics. (Strange thing, I never can figure out where physicists *keep* the Almighty, but they seem to be among His chief defenders these days.) Anyway, Harry had the complete story of the Great Pupa.

"Well, you know the Cygnians

are hatched from eggs, and they go through a metamorphosis later into the adult form we've met. Their religion is based on the belief that there is a *further* metamorphosis into a form with wings. Yes, wings. Beautiful, really. It has only happened once, when the Great Pupa achieved it. He was persecuted and tortured. They have — or had — a rather dreadful method of execution in which the victim is wrapped in acid-soaked cloth and his flesh eaten away alive. That's the figure on the pole. You do see the primitive parallel?" Harry interrupted himself.

We nodded silently, staring at a new and different Harry.

"Yes. Well, in his agony, the Great Pupa achieved the ultimate metamorphosis and appeared to his followers afterwards as a winged shape . . . Profoundly amazing, isn't it? Over eleven light-years away . . ."

He told us that he had invited S'serrrop to attend church services with him that Sunday. Did we realize no Cygnian had actually entered a Terran house of worship? We also soon realized how S'serrrop felt about it. Frightened and revolted, but resolute. When we met them after the service his crest was still half retracted.

Harry had been expounding Christian doctrine to him. The Cygnian was so excited that we could barely understand the bar-

rage of clicks. "Abast! Abast!" he exclaimed. We took this as *amazed* — or perhaps *abased*? He desired more information, and Tillie volunteered to find him a religious dictionary in which he could explore Moslem and Hindu, Greek, Roman and Hebrew doctrines as well as Harry's Massachusetts Avenue rites. We saw Harry's face cloud; Tillie told me that he became deeply exercised over questions like the propriety of using candles.

III

Next morning, I went into Harry's office, feeling a fairly strong shade of yellow myself. He was doodling on his blackboard.

"First of all, Harry, congratulations. The array of talent around here never ceases to amaze me. But — bear with me — there's one thing I'd like to get straight. Are you absolutely one hundred per cent satisfied with the official estimate of the aggressive capabilities of that ship?"

He looked at me from his Galactic evangelical dream.

"You mean, weapons?"

"Weapons. Blow-pipes, atomic disintegrators, germ cultures — call me a paranoid bastard, Harry. What could they do to us if they tried?"

"Well," he said slowly, "Really not much, Max. They have that short-range laser, and they have

about fifty tactical atomic missiles, with less advanced fusing than ours. Slow. Their auxiliary craft can't go much over Mach I all out. Very vulnerable. They have no laboratories or culture stores. A bare minimum of machining facilities. Their main craft certainly couldn't be used as a mobile torch in atmosphere. They haven't got the right guidance systems for space attack. I think the estimate is quite correct; the most they could do would be a few lucky hits on big targets before our defenses overtook them."

He XX'd out a couple of equations, angrily.

"Harry, is there *anything* about that ship you don't understand?"

"No. If you mean, in general. Oh, maybe —"

"Maybe?"

"There are one or two large generators which seem to be beyond their power needs, that's all. Just generators. They may have been in the ship when the Siggies got it, perhaps for powering a ground installation. What's eating you, Max? Here we have one of the biggest — I'm not afraid to say it, one of the sweetest things possible to conceive of . . . Probably you don't get it, Max. I feel sorry for you. I pity all atheists. But others do get it."

"I guess I don't get it, Harry, but I'll tell you what's wrong with me. I've read history. Earth history. A big strange ship full of religious symbols — an alien race, fervently

religious and revolted by the practices of the natives — doesn't that remind you of anything, Harry? No bell?"

"Sorry, it doesn't," he said. He erased the blackboard. Our comfy little shop had been invaded in more ways than one.

It got invaded some more next day when S'serrrop turned up after his session with Tillie's dictionary. We learned about another Cygnian emotion, but we weren't sure at the time what it was. At first we thought he was sick. He kept making a rustling, flittering noise which we saw were his exoskeletal joints snicking together. He said he wasn't sick, it was something else.

"Is bad," he kept repeating. "Bad! Sad! Hew — I caddot say — hew so simple! So be-hewtifut! Kch, too bad! KCHKCHCH!"

Convulsively his elbows began rubbing against his thorax in a blur of motion. A thin shriek rent the air.

Tillie grabbed one of his vibrating hands, and he grabbed back. Handholding seemed to be the same on Cygnus as it was on Terra. He stopped the cicada wail and looked gravely in our faces. Then he said something that rocked even Harry.

"So far-r-r! So bady he-years of glight!" He spread his arms in what we had come to know as the Great Pupa wing symbol. "He is hee-yar

too!" he exclaimed. The next minute he was striding down the hall in the general direction of Rock Creek Park, with his UnPo guard scrambling after.

Two hours later we discovered he had stampeded State into flying him back to his group, who were touring Mexico. He said he had something urgent to tell them.

In the turmoil, there arrived a covert signal from George. As predicted, our Chief Linguist was shackled up with his explosive lexical treasure around the far side from Mersenius, and playing doggo. He had found an old pal at Mersenius to pass on a message demanding data on the Cygnians. The signal ended, "Don't trust those polyunsaturated pygmies."

"Small men loathe each other," Tillie commented.

Of course you realize that the Cygnians had a written language in addition to the cartoon figures they used for first contact, but George hadn't seen it before he left. I rooted out the negatives of the script-covered missile George was working on. They looked pretty bad. Can you imagine a Chinese trying to decipher *Ne pas se pencher en dehors* in five European languages? Well, there were about five hundred choice graffiti on each negative; some you wouldn't believe."

"Tillie girl, can you locate Cygnian script among any of these?"

"I don't know. But I'll try."

"What about those tech manuals they gave us, can't you compare scripts?"

"They were in the script of whoever built the ship, and mostly diagrams and math."

"Well, don't we have any Cygnian samples?"

"Mostly their cursive."

Something was all wrong, all right. She was as stiff as an offended librarian. I pulled her around.

"So you think I'm a stinker. Give me a break. Remember it's just that old heathen Max, who scares easy."

"I think you're being unforgivable to Harry," she started. Then she squinted at me through her swag of hair. "Max, are you really scared?"

"You bet I am. Honey, I'm so scared I even think about it in bed."

"But what of, Max?"

"Oh, history, micro-macro parallelism — I don't know. That's the worst of it. See what you can get out of these, would you?"

She tried, but it was no go all Tuesday. And Wednesday you remember what happened.

The West-Hemisphere group of Siggies were holding their evening sing-in on the plaza outside the Catadrade de la Dama de something-or-other in Sao Paulo, Brazil. Inside, a minor mass was about to be celebrated. Instead of their usual

circle, the Siggies formed a line across the front steps, and the human worshippers found themselves barred out.

A couple of clerics came out to protest. The Siggies stood firm, singing. The crowd milled. A padre laid hands on a Siggie, who yielded, but another took his place. The Sound mounted. The cathedral bells started tolling. Somebody called the police, who added sirens to the uproar. At the height of the confusion two Siggies — bright orange with emotion — marched into the nave and up to the altar, where they deposited a small object. Then they marched out again and rejoined the singing.

Half a minute later the altar area of the cathedral lit up, gave off an amazing sound, and exploded into a flour-like dust which towered up over the plaza and came down all over everybody.

In the melee, the Siggies withdrew to the far side of the plaza and formed a circle. It was shortly discovered that they were now protected by some kind of force-shield, presumably generated by a large box which they always carried with them. Defense R&D had identified it as a musical amplifier.

While we were digesting this, news came that the East-Hemisphere Siggie group had pulled an almost identical stunt, resulting in major damage to the Golden Pavilion in Kyoto.

The fact that the Cygnian ship's auxiliary flyers were both out on what was described as routine maintenance tests had up to now escaped notice. After a pause, it became apparent where they were flying to. Harry's evaluation sources had been quite right; they were slow. It took the one on our side over six hours to get from Quebec 5,500 air miles, to the little group in the plaza at Sao Paulo. En route, one of our more enterprising neighbors discovered that it too was now protected by an unknown form of shielding. As it made its weary Mach I way home with the West-Hemisphere Siggies aboard, our Air Force confirmed this the expensive way.

Somewhere along the line the main ship had englobed itself too, with eight Terran technical people aboard.

"Well, I guess we know what the generators are for now," I remarked next morning, roaming restlessly around Harry's office.

"An interesting tactical problem," I mused. "What can you do with a measley few old badly guided fusion bombs — *provided you can carry them anywhere you want in perfect safety?*"

He slammed his papers down hard and inhaled and exhaled explosively. Just as he inhaled again his phone rang.



"Huh? Who — who? Get him down here! We've got to get him down here? What? All right. I'll go through your damn channels —" He banged the phone down.

"Max. They opened the ship long enough to turn loose our techs. S'serrrop came out with them. He's been hurt. Get the chief to get him."

It was Tillie who got him, but how she did it I don't know, because our chief, like everybody else, was caught up in the runaway oscillation over the Siggie atrocities. The media caught on a bit slow and generated more confusion than anything else at first. By next day, when the Siggies had leisurely vaporized Milan Cathedral

and the BaHai Temple in Chicago, the newscasters hit stride. From there on — you'll remember — it was just one bewildered yell of outrage. The Moslem world held aloof until Friday, when the Blue Mosque of Ahmed at Istanbul went up in flour. For all that first week, no one was killed or even badly hurt.

Except S'serrrop.

We met his stretcher at Andrews Air Base. He seemed glad to see Harry.

"I trite," he shrilled feebly. "I trite explait —" He thrashed a bit, under the blankets. What we could see of his hide was deep yellow, but we couldn't see much. They had treated him to an acid

message. Our medicos couldn't do much for the alien biology beyond the obvious topical applications. Like a burned human, he was in toxemia.

That was the morning the Cygnians started their broadcasts. It was now clear why they had been so eager to learn our languages, but even so, you'll recall that the first messages were more stimulating than enlightening. Our shop had the advantage of an early copy of the eight technician's reports. The Cygnians had given them an intensive briefing before they let them go.

" — Delusions of nonpersecution. Harry, I'm sorry."

He was head-in-hands, down.

"When you look at the history of the early Christian missionaries, say in Polynesia, or Africa — "

"Damnation, Max, do you think you're the only one who's read history? It was just that — my fault — I saw the Gestalt the wrong way. From their point of view, we're the heathen. You don't need to rub it in. They never even bothered to try to understand — "

"How many missionaries ever tried to understand the native religions? They just threw down the idols, burned the ju-jus, destroyed the temples . . . Disgusting! Unspeakable savage rites, I believe was the standard phrase."

"Only S'serrrop. He tried."

"Yes, he tried. He's a believer too, of course, but liberal. What it adds up to, Harry, is a bunch of dedicated, primitive fundamentalists who bought themselves a boat and set out to bring the word to the heathen. With atomics."

"Missionaries with fissionaries," squeaked Mrs. Peabody, and shut up abruptly.

"I blame myself —"

"Don't, Harry. What could a Bushman make of a gun until he'd seen it fired? He'd have put it down as a clumsy kind of club. We'd never seen a generator used to throw a standing force field."

"But how can they hope to succeed?" Tillie asked. "It's so *crazy!* To make the whole population of earth worship the Great Pupa? We aren't even the same kind of animal! It's insane."

"What do you think the Holy Family looked like to a polygamous culture where a man's father was his mother's brother? No, insane or not, conversion by the sword can work. What's our price for saving St. Peter's, or Westminster, or Santa Sophia, for starters? Or the Kremlin? Friends, don't be too sure. You'll be attending Great Pupa services in Carter Barron Amphitheatre in the near future, I promise you."

"What about you?" snapped Tillie.

"Purification," Harry was muttering. "Fire."

His eyes were pale and clear, like a Weimeraner's.

"The early Christians survived, Max. Underground, in the catacombs. In the days of the martyrs. From persecution will come rebirth."

I refrained from asking him to name a few aboriginal religions which had survived in pure form. I had something else to worry about.

"Can S'serrrop talk at all, Tillie? It's urgent."

Well, you recall what went on then, the public convulsions, the predictable and pathetic brave responses we made to the Cygnian's simple ultimatum. I guess what riled people the most was the level of their pitch. They had apparently tagged us as Stone Age Stanley. "You can see the Great Pupa is the true god, because our weapons are stronger than yours. Your false gods cannot protect themselves. Or you." Right off page one of a nineteenth-century missionary handbook. The part about them ending our local strife in universal brotherhood as children of the Great Pupa wasn't so bad, although I don't think people went for the idea of themselves as larvae. But when they got into the higher doctrinal mysteries — and what they proposed to do about our sex and mating customs, they being biologically rather different —

It was while they were explaining

that aspect that the Aussie CinC up in Quebec laid our biggest nuclear egg neatly on the Cygnian ship. The broadcast stopped. Two days later when things settled down, the ship was still sitting there englobed with debris. After awhile, a new type of transmission came out of the force-shell, and every piece of metal several kilometers beyond the blast-hole went to vapor. Then the religious broadcasts resumed. The Great Pupa was indeed a strong god.

Over everybody's protests, I tried to get S'serrrop to locate and decipher any Cygnian text he could find on my photos of George's missile.

"What in hell do you expect to prove, Max? Even if there's a Cygnian text, so what? We know the story now."

"Do we? I thought you said you'd read history."

But S'serrrop was nearly blind, and terribly weak. He did appear to recognise the photos.

"Too bad!" he whispered again. "Kchch! Too bad . . ."

"Leave him alone, Max."

"Wait! S'serrrop — Tillie, ask him this: Are there others? More like him? Coming here?"

We couldn't get his answer, but as you know, we were not left long in doubt.

Since this is just the inside story, I won't go into all the uproar and stuff you know — the steady

attrition of our religious monuments — don't think Chartres didn't rock me — the efforts of the Vatican and the International Council of Churches of Christ to negotiate some kind of co-existence for the West at least — the day the Siggies, by an understandable theological error, took out the New York Stock Exchange — the United Arab kamikazi attempt — the successful assault on two isolated Siggies in Pakistan — the Soviet proposal — you know all that. The inside story isn't much, here: Sixteen long go-arounds between me and our chief, ending in stalemate. And then the second Cygnian ship arrived.

It put down in the North African desert. Same general type, a bit newer and knobier, and coppery rather than gold. The same opening ceremonies, but these Siggies were definitely orange — the Red Siggies as they were dubbed. As you can imagine, the welcoming committee was conspicuously absent.

"Reinforcements?" Tillie asked.

"I devoutly hope so," I said. She gave me the look I was getting used to those days.

"I've got to see S'serrrop."

"You'll kill him, Max."

She was right. When S'serrrop saw the photos of the new Cygnians he went — or tried to go — into his shivering and stridulating act. It seemed to be involuntary, like uncontrollable sobs. He couldn't stop himself from knocking the

dressings around. Not that they were doing him any good, but the result was horrible. In his agony he could barely be understood. What came through clearly at the end was: "I trite! I trite!" And then something so obviously a private prayer that I snapped the recorder off. He died that night.

I spent the night with that tape and was waiting on the chief's doormat with my reconstruction in the morning. At noon he was still not in. His hot-line girl told me about the fire-fight between Yellow Siggie and Red Siggie flyers, in which most of Marseilles had come up missing.

V

At 1500 the chief was still going 'round in the high level whirlwind. I decided to take — it says here on my citation — independent initiative. What the hell, how much Class A office furniture do you get in a catacomb? I had nothing to lose.

The independence took the form of a structure of tastefully forged directives and speciously worded coordinating concurrences, at the end of which chain of duplicity there emerged in about 60 hours time one live Astromarine lieutenant. He looked exactly like a screen space hero except he had cold-sores. He contributed the action.

By this time the Red Siggies —

who seemed to be faster workers and more practical-minded — had decided that it would make for more togetherness if we evacuated our lunar bases. There was to be just one shuttle-run per each, and Mersenius was unluckily scheduled as Number Two. You'd be up all night if I told you what it took to get that boy into a disguised cargo-pod. Harry, who knew I was nuts but was too far gone to argue, helped a lot. After that we could only hope.

By this point the bands were so loaded with Red and Yellow Siggie broadcasts and counter-broadcasts and doctrinal trumpeting and counter-counter-jamming that we were virtually blind and deaf, electronically speaking. To this day, I don't understand the difference between their versions of the Great Pupa religion. Something about the powers of the clergy and the existence of other lesser Pupas or prophets. Harry is making a study of it. I was more concerned with trying to keep score of the accidental damage sustained by Earth when the Yellow and Red missionary flyers tangled. You remember how the media kept saying that they were decimating each other? Apparently, people outside really hoped that one side would eliminate the other at least, and maybe they might even kill each other off. The inside reports gave no such hope. There was no concrete evidence that they could

do each other any serious damage and the side effects on us were brutal. Marseilles was the start; next came Altoona, of all places, and poor old Coventry, and Tangiers. And a lot of smaller things.

"This phase won't last," I pontificated. "The history of religious wars is like any other. Your main attack is not on the enemy leaders but on their followers. That'll be us, when they get organized. We'll have to sign up with one lot or the other, and when we do, we'll get it. What's the matter, Harry? In particular, I mean?"

"Joddrell's picked up a new type of transmission from both ships, beamed off-planet."

"Calling for reinforcements?"

"Probably."

"And *alles ganz kaput* . . . Did you ever identify that planet S'serrrop described?"

"Not positively. I personally think that was Cygnus 61. I don't believe these creatures are Cygnians; they just came from Cygnus 61 in the sense that that was the last place they stopped. Perhaps they were there quite some time —"

"Before they and their competition managed to fracture the planetary crust."

"I wonder what the real Cygnians were like," sighed Tillie.

"What I wonder is where Lieutenant Sternhagen is. At least he wasn't brought down in the Mersenius evacuation."

As it turned out, of course, Lieutenant Sternhagen was right where he was supposed to be. He had cleverly managed to unpack himself undetected after his ghastly trip in the pod and had slipped away on his march around to the far side. All we had been able to give him was a dinky personnel jato unit. After 70 hours of hopping, sliding, gliding and tumbling he reached George, who was blissfully holed up with his life work and a nice little hydroponics set-up he had wangled out of his Mersenius pals. The young Marine, as directed, asked George one or two pointed questions. The answers being on the right trajectory, Lieutenant Sternhagen stayed not to argue, but in-

jected a little dream-juice into George's airlines. Then he had a busy time boosting the missile — carefully — out of the cave, carrying George over a couple of rim-walls and stowing him and laying a remote-control laser line.

The thing went up beautifully as demonstrated, three shorts and a long, but of course we couldn't see it on Terra. After that, the young Marine, who had received only minor radiation burns in addition to his previously acquired contusions, had nothing to do except hop, slide and tumble 70 hours back to the empty Mersenius base, hauling a hysterical George, who was undamaged except in his aspiration-level.

By a miracle, Mersenius had



registered our covert signal and left sufficient supplies to allow the pair to survive until rescue, during which time George had the opportunity to say everything he wanted to, about fifteen thousand times. It doesn't tell half enough on Lieutenant Sternhagen's medal.

After this, there was nothing at all to do but wait. And wait. And wait. The rest of the world, who weren't waiting for anything, just reacted. You know. Fortunately the loss of human life was amazingly low as yet, except for Marseilles and Altoona, where the Yellow Siggies had been holding a mass outdoor Great Pupa baptism ceremony. I'll say this for the Siggies, they were brave. The Yellow Siggie conducting services didn't even look up when the Red flyer came over — just sang harder. Glory, glory.

The weapon they chiefly used was a variant of the catalytic vaporizer business. R&D had not guessed that it could be produced as a rather bountiful fuel by-product. We counted a total of only five actual missiles expended to date. If the Red Siggies had brought in another fifty, that left ninety-five to go. Their fall-out proved to be rather more copious than the best art, too.

During the next week, two of our tracking stations got melted down, and we were down to our last ear-flaps when we caught a new ship coming in.

"The reinforcements," Harry said. He had taken to shadow-boxing the eraser, very softly.

"Why?"

"Both Siggie ships are transmitting like mad."

But it wasn't their reinforcements.

The little blue ship made one orbit and then came in low over North Africa and on to Quebec. When it had passed, both Siggie ships were still there and apparently undamaged, but they had lost some of their shine. On the ground, the Siggie groups were scrambling first for cover and then for their ships. We only caught part of the saurian transmission on Cygnese — something about one planetary rotation.

Thirty hours later both Red and Yellow Siggies were on their way out of our system, leaving us with four smashed cities, innumerable wrecked houses of religion, and more maypole effigies of the Great Pupa than could be counted before they were melted down. The blue lizards left too — we still don't know where they're from.

"You guessed they were cops . . . How?" said Harry, when we were celebrating George's return. After blowing out his outrage on Sternhagen, George had more or less run down about the criminal destruction of his Galactic key.

"My glands. Primitive response

to the fuzz gestalt. Once you saw them as two guys in a squad car, it all fit. They couldn't stick around. They set up call-boxes. One demonstration of how to work it, good-bye. Holler if you need help, right, George? Tell me, old brother, how long had you known? Never mind, don't answer that. I respect a man who values knowledge more than the mere survival of his culture. Not to say his species. I won't ask you if you would ever have got 'round to triggering it —"

"Max!" shouted Tillie.

"All right. There was a report that these so-called Cygnians, maybe others too, were messing around with backward planets. Somewhere, there's a minor policy directive. Pressure from a Society to Save Our Seminoles. Low budget. Two guys to cover a sector. Probably left a set of flares around any number of likely planets. The Siggies knew damn well what they were, too."

"Is that like history?" ventured Mrs. Peabody.

"Not really. Certainly not in the old days. The poor benighted heathen caught in sectarian wars just suffered. Did any of you read about what happened to people who happened to be in the path of a crusade, by the way? We've missed that, so far."

"Their religion was sort of poetic in a way. I mean, changing to wings —"

I saw Harry wince.

"Tell you what isn't so beautiful, if you want more history. This is all early-stage stuffs. Informal wild-cattin'. Like when Tahiti or the Congo were months away from Europe, and North America was half wild. What happens now we got saved? Do we go back to our palm-trees and peace?"

"Why not?" shrugged Tillie. Then she said, "Oh."

"Exactly. What happened when industrial nation-states got organized into coalitions and went to war for global mastery? What happens to the people in the sarongs when something like Admiral Tojo's fleet sails into the lagoon to set up a fortified base? And something like Admiral Nimitz' fleet and the Allied Air Force arrives to throw him out?"

". . . And Eniweitok," murmured Harry.

Pouring George a drink, she asked, "Did any of you know how old S'serrrop was?"

"Huh?"

"A kid. About like our nineteen. He got involved with the natives and felt sorry for us and begged the heads of the mission to leave us alone, because the Great Pupa's spirit had already touched us, in another form. That made him a heretic."

"Any parallels on that, Max?"

We went to bed on that one and I'll leave it with you. Along with the original meaning of the word *Bikini*.
END

(Continued from page 98)

"Hanardy has a memory of something, Pat. That's all. *And that is all there is.* That's all that's left of the Great Galactics."

Pat gasped, "If it's nothing, why are you scared?"

"It's not quite nothing," Sween-Madro replied patiently. "There is a — potential. One chance in a million. I don't want him to have any chance to use it, though of course we'll presently have to take a chance with him and put him into a state of sleep."

He released her and stepped back. No, no, my dear, there's no possible chance of you making use of some special ability in Hanardy — *because I know he's over there by the door.* And he can't move fast enough to get over here and hit me with that metal bar."

The tense Hanardy sagged. And Pat Ungarn seemed frozen, glaring at the creature. She came back to life, abruptly. "I know you don't dare shoot Steve. So why don't you shoot me?" Her tone was up in pitch, challenging.

"Hey!" said Hanardy. "Careful!"

"Don't worry, Steve," she answered gaily without turning around. "It's not because I have any I.Q. potentialities. But he won't touch me either. He knows you like me. You might have a bad thought about him at a key moment, later. Isn't that right, Mr. Dreegh? I've got your little dilemma figured out,

haven't I, even though I've only got a Klugg brain."

Her words seemed suicidal to Hanardy. But Sween-Madro just stood gazing at her, swaying a little, saying nothing — a naked scarecrow of a man from the waist up, and below, wearing knee-length dungarees over bone-thin legs.

Yet there was no belief in Hanardy that the Dreegh was vulnerable. He remembered the other's high speed movements — that seemingly instantaneous transition from one location in space to another . . . from the bed to Pat, at invisible speed. Fantastic!

Once more Pat's voice broke the silence, mockingly: "What's this? An I.Q. of 400 or 500 baffled? Doesn't know what to do? Remember, no matter what action you take, he can't stay awake much longer. It's only a matter of time before something has to give."

At that point, another sharp anxiety struck through Hanardy. He thought: She's wasting time. Every minute those other Dreeghs are getting closer!

The thought was so urgent in his mind, he spoke it aloud, "For Pete's sake, Miss Pat, those other Dreeghs'll be here any second—"

"Shut up, you fool!"

Instantly shrill, hysterical, terrified — that was her totally unexpected reaction.

She said something else in that same high-pitched tone, but Han-

ardy did not hear it clearly. For in that moment between his own words and hers, the Dreegh turned. And his arm moved. That was all that was visible. Where did it move to? The super-speed of the movement blurred that. It could only, logically, have been toward the pocket of his dungarees, but nothing like that was visible.

A weapon glittered; a beam of light touched Hanardy's face.

As blackness swept over him, he realized what else it was the girl had said: "Steve, he'll put you to sleep while that thought about the Dreegh's coming quickly is in your mind. . . . "

VIII

How swiftly can transition between wakefulness and sleep take place?

As long as it requires for the wakefulness center to shut off and the sleep center to turn on.

So there is no apparent conscious time lag. If you live a dull, human existence, it seems brief enough.

To Hanardy, who was normally duller than most, it seemed no time at all.

He started forward, his lips parted to speak — and he was already asleep . . . so far as he — the self — was aware. He did have a vague feeling of starting to fall.

Consciously, nothing more occurred.

Below the conscious, there was a measurable lapse of time.

During that time, the particles inside the atoms of his body did millions of millions of separate actions. And molecules by the quadrillion maneuvered in the twilight zone of matter. Because of the thought that had been in Hanardy's mind, at some level of his brain he noticed exact spots of space, saw and identified the other-ness of the Dreeghs in the approaching Dreegh ship, estimated their otherwhereness, computed the mathematics of change. It was simple in the virtual emptiness of space, difficult where matter was dense. But never impossible.

As he did so, the Dreegh ship with its eight Dreeghs changed location from one spot to another exact spot in space, bridging the gap through a lattice-work of related spots.

In the bedroom in the meteorite, the visible event was that Hanardy fell. A twisting fall, it was, whereby he sprawled on his side, the arm with the metal bar in it partly under him.

As Hanardy collapsed to the floor, the Dreegh walked past Pat toward the open door behind it. Reaching it, he clutched at it, seemingly for support.

Pat stared at him. After what had happened she didn't quite dare to believe that his apparent weakness was as great as she saw it to be.

Yet after a little, she ventured,

"May I ask my father a question?"

There was no answer. The Dreegh stood at the door, and he seemed to be clinging to it.

Excitement leaped through the girl.

Suddenly she dared to accept the reality of the exhaustion that was here. The Dreegh's one mighty effort had depleted him, it seemed.

She whirled and raced over to Hanardy, looking for the metal bar. She saw at once that he was lying on top of it and tried to roll him over. She couldn't. He seemed to be solidly imbedded in the floor in that awkward position.

But there was no time to waste! Breathing hard, she reached under him for the metal weapon, found it, tugged at it.

It wouldn't budge.

Pull at it, twist it, exert all her strength — it was no use. Hanardy had a vice-like grip on the bar, and his body weight reinforced that grip. Nothing she could do could move it, or him.

Pat believed the position, the immovability, was no accident. Dis-mayed, she thought the Dreegh caused him to fall like that.

She felt momentarily awed. What an amazing prediction ability Sween-Madro had had — to have realized the nature of the danger against him and taken an exact defense against it.

It was a maneuver designed to defeat, exactly and precisely, a

small Klugg woman, whose ability, at duplication could not lighten the weight of a body like Hanardy's enough to matter and whose ability to solve problems did not include the ability to unravel a muscularly knotted hand grip.

But — she was on her feet, infinitely determined—it would do him no good!

The Dreegh also had a weapon. His only hope must be that she wouldn't dare come near him.

Instants later, she was daring. Her trembling fingers fumbled over his dungarees, seeking openings.

They found nothing.

But he *had* a weapon, she told herself, bewildered. He fired it at Steve. I saw him!

Again, more frantically, she searched all the possibilities of the one garment he wore—in vain.

She remembered, finally, in her desperation, that her father must have been watching this room. He might have seen where it was.

"Dad!" she called anxiously.

"Yes, my dear?" The reply from the intercom came at once, reassuringly calm.

Watching the Dreegh warily, she asked, "Do you have any advice on how to kill him?"

The old man, sitting in the control room of the meteorite, sighed. From his viewpoint, he could on one viewplate see the girl, Hanardy's unconscious body and Sween-Mad-

ro; on another he observed gloomily that the Dreegh ship had arrived and had attached to an airlock. As he watched that second viewplate, three men and five women came out of the ship and into a corridor of the meteorite. It was obvious that killing Sween-Madro was no longer of value.

The girl's voice cut across his awareness. "He must have used the super-speed again without my noticing and hidden his weapon. Did you see what he did with it?"

What Professor Ungarn was seeing was that the newly arrived Dreeghs, though in no hurry, were heading directly toward Madro and Pat.

Watching them, the professor thought, Pat was right. Sween-Madro had been vulnerable. He could have been killed. But it was too late.

Sick with self-recrimination he abandoned the control room and hurried to join his daughter.

By the time he arrived, Sween-Madro was back in the bed, and Hanardy had been lifted onto a powered dolly which had been wheeled alongside a machine that had evidently been brought from the Dreegh ship.

The machine was a simple device with a pair of bulbous, transparent cups and a suction system. A needle was inserted into a blood vessel on Hanardy's right arm.

Swiftly, a turgid bluish-red liquid rose in one of the bulbous cups; about a quart, Professor Ungarn estimated to his daughter in a whisper.

One by one, wordlessly, the Dreeghs went to the machine. Another needle was used. And into each a tiny drain of blood siphoned from the red stuff in the bulbous cup. It seemed as if about half of it was taken.

Still without anyone speaking, the needle was inserted into Sween-Madro's arm; and the rest of the blood from the cup flowed into him.

Pat stared at the dreadful beings with avid curiosity. All her life she had heard of, and been warned against, these creatures; and here they were from all those distances of years and miles. Four men and five women.

Three of the five women were brunette, one was a blonde; the fifth was a redhead.

The women were, every one, tall and willowy. The men were uniformly six feet four or five and gaunt of build. Was height a part of the Dreegh illness? Pat wondered, seeing them together like this. Did Dreegh bones grow as a result of their disease? She could only wonder.

The figure on the bed moved. Sween-Madro opened eyes and sat up.

He seemed shaky and unsure.

Again, there was silent action. The Dreegh men did not move, but the women one by one went over and lightly kissed Sween-Madro on the lips.

At each touch of lips there was a faint bluish light, a flash of brightness, like a spark. Invariably, the blue spark leaped from the woman to the man.

And with each flash he grew more alive. His body became visibly larger. His eyes grew bright.

Pat, who had been watching with total fascination, suddenly felt two pairs of hands grab her. She had time to let out a shriek as two Dreegh men carried her over to Sween and held her above him, her face over his.

At the final moment, she ceased her futile struggle and froze.

She was aware of Sween's sardonic eyes gazing up at her. Then, with a deliberate movement he raised his head and brushed her lips with his.

She expected to die.

Deep inside the back of her head, a fire started. The heat of it seemed instantly unbearable; instantly there was a flash of blue flame from her lips to his.

Then she was back on the floor, dizzy, but — as she realized presently — recovering. And still alive.

Sween-Madro swung his feet over the edge of the bed and said, "The existence of such brother-

and-sister energy flows, Pat — which you have now experienced — and the Dreegh ability to use them make it likely that we could become the most powerful beings in the galaxy on a continuing basis. If we can defeat Hanardy. We only took about ten percent from you. We don't want you damaged — yet."

He stood up, walked over and looked down at the unconscious spaceman. Presently he beckoned Pat and Professor Ungarn; father and daughter came at once.

The Dreegh said, "I'm still not well. Can you detect any change in him?" He did not wait for a reply, but said in relief, "I guess nothing happened. He looks as low-grade a human as you could ever not want to meet or deal with in any way, and that's the way he was before — don't you agree?"

Pat said quickly, "I don't understand. What did you expect?"

"Hopefully, nothing," was the reply. "But that remark about how near our ship was was the first un-programmed use of his ability. A spatial relationship action like that comes in the Great Galactic intelligence curve at about I.Q. 1200."

"But what did you fear?" Pat persisted.

"That it would feed back through his nervous system!"

"What would that do?"

The Dreegh merely stared at her,

sardonically. It was Professor Ungarn's voice that finally broke the silence. "My dear, the Dreeghs are actually acting as if their only enemy is a programmed Hanardy."

"Then you believe their analysis of the nature of the Great Galactics?"

"They believe it; so I believe it."

"Then there's no hope?"

The old man pointed at Hanardy. "There's Steve."

"But he's just a bum. That's why we selected him to be our drayhorse, remember?" She spoke accusingly. "Because he was the dumbest, most honest jerk in the solar system — remember?"

The old man nodded, suddenly looking gloomy. Pat became aware that the Dreeghs were watching them, as if they were listening.

It was one of the dark-haired women who spoke. "My name is Rilke," she said. She went on, in a low, husky voice, "What you've just described — a man as unimportant as this one — is one of the reasons why we want to go to Europa. We must find out what *did* the Great Galactic see in this strange little man. We should know because for our blood storage tanks and energy pool we need the blood and life force of a million people from this otherwise undefended planetary system. And we dare not kill a single one of those million until the riddle of Hanardy is resolved."

Take a sentient being —

Everyone aboard the Dreegh super-ship that flew to the moon Europa in thirty hours (instead of many weeks) fitted that description: the Dreeghs, Pat, Professor Ungarn, and the sleeping Hanardy.

They had brought along Hanardy's freighter to be their landing craft. They came down without incident into Hanardy's permanent spaceship berth in Spaceport, the large moon's principal city.

Consider any sentient person—

That includes a man asleep . . . like Hanardy.

There he lies, helpless. In that fourth sleep stage that Hanardy was in — the deep delta-wave stage — push at him, hit him, roll him over. It is enormously difficult to awaken him. Yet it is in this state that a person can act out a sleepwalker's strange goal.

Force this sentient individual to interact with a grossly vast universe —

"We're taking no chances," said the Dreegh brunette woman, Rilke. "We're going to bring him into motion on the somnambulistic level."

It was Sween who directed a bright light at Hanardy's face; after mere seconds, he shut it off.

There was a measurable passage of time. Then the body on the bed stirred.

A second woman — the blonde — without glancing up from the instrument she was monitoring, made a gesture and said hurriedly, "The somnambulistic purpose is in the delta-wave band 3-10-13B."

It was a private nomenclature that meant nothing to Pat. But the words caused an unexpected flutter of excitement among the Dreeghs.

Sween-Madro turned to Pat. "Have you any idea why Hanardy should want to visit with, and have a feeling of affection for, thirteen people in Spaceport?"

Pat shrugged. "He associates with certain space bums around town," she said contemptuously. "Typical hangers-on of the kind you find out in space. I wouldn't waste a minute on them."

Sween said coldly, "We take no chances, Pat. The ideal solution would be to kill all thirteen. But if we do, Hanardy might have punitive dreams about us as he awakens — which awakening will happen very soon now, one way or another. So — " the long gaunt face cracked into a grimace of a smile — "we'll render them useless to him."

"Ssssh!" said the blonde woman. She motioned toward the figure on the bed.

The somnambulistic Hanardy had opened his eyes.

Pat was aware, then, of the Dreeghs watching alertly. Invol-

untarily, briefly, she held her breath and waited.

Hanardy did not glance at her or at the Dreeghs, showed no awareness of anyone else being in the room.

Without a word, he got out of bed and removed his pajamas. Then he went into his bathroom and shaved and combed his hair. He came out again into the bedroom and began to dress, putting on his dirty pants, a shirt and a pair of boots.

As Hanardy walked out of the room, Rilke shoved at Pat. "Remain near the sleepwalker," she commanded.

Pat was aware that Rilke and Sween-Madro stayed close behind her. The others had slipped somewhere out of sight.

The somnambulistic Hanardy opened the airlock and headed down the gangplank.

Sween-Madro gestured with his head for Pat to follow.

The girl had hesitated at the top of the spidery "plank." And now she stood for a moment gazing out at the city of Spaceport.

The airlock of Hanardy's freighter was located about fifty feet above the heavy lower scaffolding that held the vessel. There was a space of about five feet between the opening and the upper scaffolding which actually constituted a part of the dock.

Almost straight ahead of her Pat could see the first building of the city. It was hard for her to realize that the entire populace of the port, with all their available equipment, had no chance against the Dreeghs. There was no protection here for her, or Hanardy, or anyone.

Awe came. The decisive factor was the intelligence of the Dreeghs.

She thought: and what's in Steve's *memory* of intelligence is all that stands between these vampires and their victims.

Minutes later she found herself walking beside Hanardy. She stole a glance at his blank face, so stolid and unintellectual. He seemed like a small hope, indeed.

The Dreeghs and she followed Hanardy along a street, into a hotel, up an elevator and along a corridor to a door numbered 517. Hanardy pressed a little button, and after a little the door opened. A middle-aged woman shuffled into view. She was dumpy and bleary-eyed, but her face brightened into a welcoming smirk as she saw Hanardy.

"Hi, there, Han!" she yelled.

Having spoken, she must have realized that the Dreeghs and Pat were with the spaceman. If she had any defensive thought, it was too late. Sween made her helpless with his mechanical light-flash hypnotism, about which he commented casually after they were inside and

the door shut, "Nothing more complex is needed for human beings, or—" he shrugged—"Kluggs. Sorry, Pat," he apologized to the girl, "but the fact is that, like the people of this system, you also have a vague idea that hypnotism and other non-conscious phenomena were invented by hypnotists and similar unscrupulous people."

He added ruefully, "You'll never surprise a Lennel, or a Medder, or a Hulak with any control method short of —" He broke off. "Never mind!"

He turned to the woman. Presently, under his guidance she was speaking enforced truths about her real relationship with Hanardy.

From the time they had met, Hanardy had given her money.

"What does he really get for it?" asked Rilke.

"Nothing."

Since their method evoked only truth, Rilke frowned at Sween, "It couldn't be altruism. Not on his low level?"

It was visibly an unexpected development. Pat said scathingly, "If altruism is an I.Q. factor, you Dreeghs probably come in below idiot."

The man did not reply. The next instant his preternaturally long body was bending over the bloated female whom they had so briefly interrogated. There was a flash of blue as his lips touched

hers. Half a dozen times he repeated that caricature of a kiss. Each time, the woman grew visibly smaller, like a sick person fading away on a hospital bed.

Finally, a bright light was flashed into the tired eyes, excising all memory of her degradation. But when they departed, the shriveled being on the bed was still alive.

The next person that the somnambulist Hanardy led them to was a man. And this time it was Rilke who took the glancing kiss, and it was into her nervous system that the blue fire was drawn.

They drained all thirteen of Hanardy's friends in the same way; and then they decided to kill Hanardy.

Grinning, Sween explained. "If we blow him up with you, the woman for whom he feels a dumb devotion, standing beside him in his home port — the only home he knows — he'll be busy protecting those he loves. And then we, who will be out in space while this is going on, will probably survive the few instants that it will take for him to awaken."

As she heard those words, Pat felt a hardening of her own resolve, a conviction that she had nothing to lose.

They had started up the metal gangplank that led to the airlock of Hanardy's ship. Hanardy walked blankly in front, behind him was the girl, then Rilke, and, bringing

up the rear, Sween. And they reached the final few feet, Pat braced herself and spoke aloud.

"It seems wrong, —" she said.

And leaped forward. She put her hands against Hanardy and shoved him over the side of the plank.

As she expected, the Dreeghs were quick. Hanardy was still teetering over the fifty-foot drop from the narrow walk when both the man and woman were beside him. As one person, they reached over the low handrail, reached out, reached down. That swiftly they had him.

In pushing at Hanardy, Pat found herself automatically propelled by the effort of her thrust away from Hanardy and over the other edge of the plank.

As she fell, she completed in her mind the sentence she had begun: It seems wrong . . . not to put that dumb love to the uttermost test!"

X

Spaceport, on Europa, like other similar communities in the solar system, was not at all like an ordinary little town of four thousand human beings. If anything, it resembled an old-style naval refueling station in the South Pacific, with its military establishment and garrison. Except that the "garrison" of Spaceport consisted of technical experts who worked in

complex mechanical systems for the repair and servicing of spaceships. In addition, Spaceport was a mining post, where small craft brought their meteorite ore, gigantic plants separated the precious from the debris, and the resultant refined materials were trans-shipped to Earth.

The similarity to a South Pacific port was borne out in one other respect. Exactly as each little island post of Earth's Pacific Ocean gradually accumulated a saturation of human flotsam and jetsam, so on Spaceport there had gathered a strange tribe of space bums. The tribe consisted of men and women in almost equal numbers, the size of the group being variable. Currently, it consisted of thirteen persons. They were not exactly honest people, but they were not criminals. That was impossible. In space, a person convicted of one of the basic crimes was automatically sent back to Earth and not allowed out again. However, there was a great tolerance among enforcement officials as to what constituted a crime. Not drunkenness, certainly, and not dope addiction, for either men or women. Any degree of normal sex, paid for or not, was never the subject of investigation.

There was a reason for this latitude. The majority of the persons involved — men and women — were technically trained. They

were bums because they couldn't hold a steady job, but during rush periods, a personnel officer of the pressured company could often be found down in the bars on Front Street looking for a particular individual, or group. The bums thus located might then earn good money for a week or two, or perhaps even three.

It was exactly such a personnel officer looking for exactly such lost souls who discovered all thirteen of the people he wanted — four women and nine men — were sick in their hotel rooms.

Naturally, he called the port authorities. After an examination, the M.D. who was brought in stated that all thirteen showed extreme weakness. They seemed to be, as he so succinctly put it, "only marginally alive."

The report evoked an alarm reaction from the Port Authority. The Director had visions of some kind of epidemic sweeping up from these dregs of people and decimating his little kingdom.

He was still considering a course of action when reports from private doctors indicated that the illness, whatever it was, had affected a large number of affluent citizens of Spaceport in addition to the bums.

The total in the final count came to a hundred and ninety-three persons sick with the same loss of energy and near-death apathy.

At some mind level, Hanardy became aware that Patricia Ungarn was falling to her death.

To save her, he had to get energy from somewhere.

He knew immediately where the energy would have to come from.

For a cosmic moment, as his somnambulism was disrupted and replaced by the dreaming state that precedes awakening, he was held by rigidities of his personality.

There was a split instant, then, as some aware part of him gazed in amazement and horror at a lifetime of being a sloppy Joe.

That one glance of kaleidoscopic insight was all that was necessary.

The barriers went down.

Time ceased. For him, all particle flows ended.

In that forever state, Hanardy was aware of himself as being at a location.

Around him were 193 other locations. He observed at once that thirteen of the locations were extremely wavery. He immediately excluded the thirteen from his purpose.

To the remaining 180 locations, he made a postulate. He postulated that the 180 would be glad to make immediate payment.

Each of the 180 thereupon willingly gave to Hanardy seven-tenths of all the available life-energy in their 180 locations.

As that energy flowed to Hanardy, time resumed for him.

The living universe that was Steve Hanardy expanded out to what appeared to be a great primeval dark. In that dark were blacker blobs, nine of them — the Dreeghs. At the very heart of the black excrescences ran a fine, wormlike thread of silvery brightness: the Dreegh disease, shining, twisting, ugly.

As Hanardy noticed that utterly criminal distortion, he became aware of a red streak in the sinister silver.

He thought, in immense astonishment, "Why, that's my blood!"

He realized, then, with profound interest that this was the blood the Dreeghs had taken from him when they first arrived at the Ungarn meteorite.

They had given Sween most of it. But the others had each eagerly taken a little of the fresh stuff for themselves.

Hanardy realized that that was what the Great Galactic had noticed about him. He was a catalyst! In his presence by one means or another people got well . . . in many ways.

In a few days longer, his blood in them would enable the Dreeghs to cure their disease.

The Dreeghs would discover the cure belatedly — too late to change their forcing methods.

For Hanardy, the scene altered.

The nine black blobs were no longer shaped by their disease, as he saw them next. He found himself respecting the nine as members of the only race that had achieved immortality.

The cure of them was important.

Again, for Hanardy, there was a change. He was aware of long lines of energy that were straight and white flowing at him from some greater darkness beyond. In the near distance was a single point of light. As his attention focused there, all the numerous lines, except from that light-point, vanished.

It occurred to Hanardy that that was the Dreegh ship and that, in relation to earth, it would eventually be in a specific direction. The thin, thin, white line was like a pointer from the ship to him. Hanardy glanced along that line. And because he was open — oh, so open! — he did the touching. Then he touched other places and did a balancing thing between them and the Dreegh ship.

He oriented himself in space.

Oriented *it!*

As he completed that touching, he realized that the Dreegh ship was now slightly over six thousand light-years away.

That was far enough, he decided.

Having made that decision, he allowed particle flow to resume for the Dreeghs. And so —

As time began again, the Dreeghs found themselves in their own spaceship. There they were, all nine of them. They gazed uneasily at each other and then made a study of their surroundings. They saw unfamiliar star configurations. Their unhappiness grew. It was not a pleasant thing to be lost in space, as they knew from previous experience.

After a while, when nothing further happened, it became apparent that — though they would probably never again be able to find the Earth's solar system — they were safe . . .

Pat's first consciousness of change was that she was no longer falling. But no longer on Europa. As she caught her balance, she saw that she was in a familiar room.

She shook her head to clear away the fuzziness from her eyes. And then she realized it was a room in the Ungarn meteorite, her home. She heard a faint sound and swung about — and paused, balancing on one heel, as she saw her father.

There was an expression of relief on his face. "You had me worried," he said. "I've been here for more than an hour. My dear, all is well! Our screens are back to working; everything is the way it was . . . before. We're safe."

"B-but," said the girl, where's Steve?"

. . . It was earlier. Hanardy had the impression that he was remem-

bering a forgotten experience on the Ungarn meteorite — a time before the arrival of Sween-Madro and the second group of Dreeghs.

The Great Galactic of that earlier time, he who had been William Leigh, bent over Hanardy where he lay on the floor.

He said with a friendly, serious smile, "You and that girl make quite a combination. You with so much owed to you, and she with that high ability for foolhardiness. We're going to have another look at such energy debts. Maybe that way we'll find our salvation."

He broke off. "Steve, there are billions of open channels in the solar system. Awareness of the genius in them is the next step up for intelligence. Because you've had some feedback, if you take that to heart you might even get the girl."

Leigh's words ended abruptly. For at that instant he touched the spaceman's shoulder.

The memory faded —

XII

It was several weeks later.

On the desk of the Port Authority lay the report on the illness which had suddenly affected 193 persons. Among other data, the report stated:

It develops that these people were all individuals who during the past fifteen years have taken advantage of a certain low I.Q. per-

son named Steve Hanardy. As almost everyone in Spaceport is aware, Hanardy — who shows many evidences of mental retardation — has year after year been by his own simple-minded connivance swindled out of his entire income from the space freighter, ECTON-66 (a type classification) — which he owns and operates.

In this manner so much money has been filched from Hanardy that, first one person, then another, then many, set themselves up in business at their victim's expense. And as soon as they were secure, each person in turn discarded the benefactor. For years now, while one human leech after another climbed from poverty to affluence, Hanardy himself has remained at the lowest level.

The afflicted are slowly recovering, and most are in a surprisingly cheerful frame of mind. One man even said to me that he had a dream that he was paying a debt by becoming ill; and in the dream he was greatly relieved.

There's some story around that Hanardy has married the daughter of Professor Ungarn. But to accept that would be like believing that everything that has happened has been a mere background to a love story.

I prefer to discount that rumor and prefer to say only that it is not known exactly where Hanardy is at present.

END



Dear Editor:

May I commend you on your policy of printing a story by a beginning writer in each of your issues? This is a praiseworthy policy and no doubt encourages many aspiring authors to take a shot at science fiction.

However, why not go another step forward and publish monthly a story with as little of the jargon of the medium as possible, and that little clearly explained; terms defined so they could be understood by any person reading his first science-fiction story. SF has developed a vocabulary of scientific designations, quasi-scientific or plain imaginative; a lexicon all its own and as foreign as Greek to tyros — especially women. Let's get down to bed-rock terms, or explained technical terms, in one masterpiece in each copy. New readers must learn to crawl, then walk, run or fly. — Hugh Allen, 2511 Nadine St., Knoxville, Tenn. 37917.

* * *

Dear Editor:

In re Rick Norwood's query concerning the book he and his friends are trying to identify: It is *Star Bridge*, by Jack Williamson and James E. Gunn, published in 1955 by

Gnome Press and reprinted by Ace Books in 1963. (Incidentally, Horn is not "wrongly branded a criminal", but is actually a hired assassin and is presented as such at the opening of the story.)

I really think *If* and *Galaxy* are fine magazines; and with *Galaxy* going monthly, I hope we'll see more features ("If — and When" is a good beginning). How about a regular queries-and-answers column? I know I, for one, would take advantage of it from time to time. How about an expanded *Hue and Cry*? How about some suggestions from other readers for or against some new features? — William F. Phillips, 19 Dean St., Brooklyn, NY 11217

● Many readers identified *Star Bridge*, and our thanks to all. And queries and answers are welcome here in *Hue and Cry*. So are any suggestions for features you do or don't want. — Editor.

* * *

Dear Editor:

I have read and enjoyed *If* for umpteen years. Can anyone help me on this short story? Heinlein, I had thought. A spaceship lands on a planet with no life on it but trees which

wage war on each other. I think the human goofed them up. Also, who wrote *So Shall Ye Reap*? Written in late forties or very early fifties. — Agnes O. McGuire, P.O. Box 574, Richland, Wisc. 99352

● *So Shall Ye Reap* was by Rog Phillips (Roger P. Graham) in the August, 1947 issue of *Amazing*. Maybe some reader can identify the other story; not by Heinlein, certainly. — Editor.

* * *

Dear Editor:

There seems to be a rash of readers writing you asking for stories by their favorite authors. I might as well put in my two cents, too. How about some stories by Lin Carter, particularly in reference to his Thongor series? By the way, has his column been dropped? And how about a few from Michael Moorcock, if he is writing any in the tradition of his Elric series?

Yours is an excellent magazine. To have been awarded a Hugo twice means that you must be pleasing most everybody. But please, how about a good old sword-and-sorcery story once in a while for those of us who enjoy pure entertainment alone every now and then? — Larry Neagle, 4019-39th, Lubbock, Texas.

● Most readers seem to object to having both science fiction and pure fantasy in the same magazine. But you'll be happy to know that we are going to publish some good old sword-and-sorcery tales and other fantasy in a new magazine, *Worlds of Fantasy*, edited by Lester del Rey. It should be on the stands shortly after this issue of *If*, and it's definite-

ly pure entertainment. Lin Carter's column, incidentally, was discontinued because it seemed that Lin had already covered the subject so thoroughly that more would be nothing but repetition. — Editor.

* * *

Dear Editor:

The Morrow cover for *The Sleeper with Still Hands* must surely be one of the all-time greats — as art, rather than illustration.

May I suggest you obtain more Larry Niven stories, more long Zelazny, more Delany and — more Gree stories! The Gree novelettes show the hand of a fine, first-class craftsman; we need more like these — nothing tremendous about them, but sheer fun. These stories and others like them are really what form the foundation of SF.

How about some stories of computers? Some that don't show them as harbingers of doom for the human race. Stories like D. F. Jones's *Colossus* make good reading, but for one whose occupation lies in the data-processing field, they are likely sometimes to make one feel like Benedict Arnold.

Perhaps some of your readers can help me. I'm looking for a story that appeared, I believe, in *Galaxy* around 1960. It had the flavor of a Poul Anderson. It involved a spiderlike race that destroyed Earth and almost all of its human inhabitants, save for a few wanderers. They returned to Earth and, finding it a rather unhealthy place, fled; they intended to revive the human race, there being just one catch: Being an all male crew, they had no Eve. I never did finish it. If any of your readers have

the issues containing this story lying around with no one reading them, perhaps they would write to me — I would then become eternally grateful to them.

Compliments to the chef; you cook up a *fine* magazine. — C. D. Van-Laningham, 1822 N. 36th Ave., Stone Park, Ill. 60165

● Most of your want list is coming up! And the story was by Poul Anderson — *The Day After Doomsday*, December and February 1961 issues of *Galaxy*. — Editor. ...

* * *

Dear Editor:

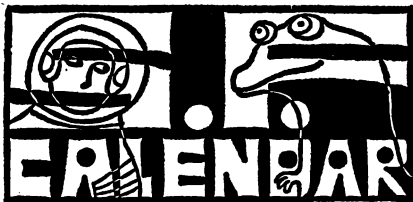
I have been a firm science-fiction fan since I was 6. During that time I have never met anyone who was *really* interested in SF. People have been giving me an inferiority complex because they feel that no one who has any intelligence reads science fiction. I realize that is not the case. But . . .

By and far, my biggest complaint is that I have no one to discuss

science fiction with on any level. One of my friends states that she likes it but she never gets past *Star Trek*. There are probably many people who have the same problem as I. Isn't there some way you or the rest of those of First Fandom could do to help us?

Why don't you start a pen-pal club for science-fiction fans? It would not have to be a regular club with dues and all; people could merely send in a self-addressed envelope and a card with name, address and possibly age. Then the cards could be placed in another's envelope and be exchanged. I feel that people who have an interest in SF should have some way of personal communication. — Mary Lou Kundrat, Box 451, Seton Hill College, Greensburg, Pa. 15601

● Why not try writing to those whose names appear in *Hue and Cry*? Some of them will surely be happy to answer! Or perhaps some of the readers share your need for communication and will write you. — Editor.



October 18-20, 1968. TOLKIEN CONFERENCE, sponsored by the Tolkien Society of America. At Belknap College, Center Harbor, New Hampshire 03226. Papers are being solicited. Indicate whether you will present a paper or will just attend. Submit title and length of proposed papers early to Ed Meskys (address above).

November 9-10, 1968. PHILCON. At

Sylvania Hotel, Broad & Locust Streets, Philadelphia, Pennsylvania. Features: Panel Discussion about "Science in Society," moderated by Ted Thomas; Ben Bova on "Weather Control"; panels on sex and violence in the future, with Fred Pohl, Lester del Rey, James Blish, *et alii* . . . A special open meeting of the Philadelphia Science Fiction Society will be held at the YMCA (Broad and Arch Sts.) on November 8, at 8 P.M. — all welcome. For information: Tom Purdom, 4734 Cedar Avenue, Philadelphia, Pennsylvania 19143.

April 11-13, 1969. LUNACON. Guest of Honor: Robert (Doc) A. W. Lowndes, Advance membership \$2.00, or \$2.50 at the door. Two Progress Reports will be sent to members. For information: Franklin M. Dietz, 1750 Walton Avenue, Bronx, New York 10453.

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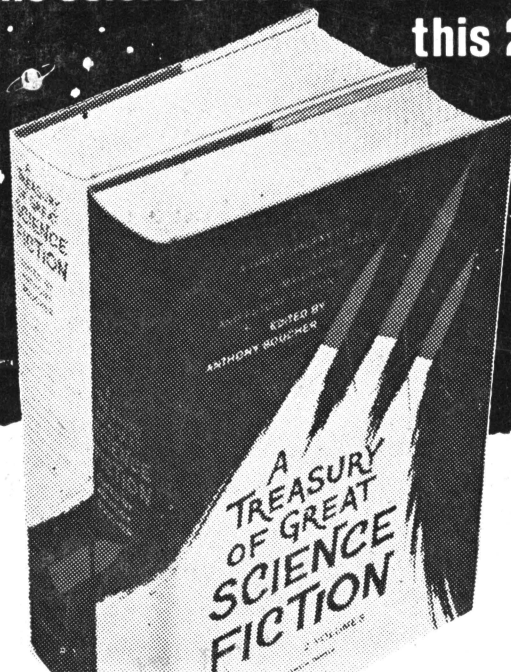
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