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WORLDS of SCIENCE FICTION

AUGUST 1957

All Stories New and Complete

Editor: JAMES L. QUINN

Assistant Editor: EVE WULFF

Art Director: MEL HUNTER

SPECIAL!

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by Mel Hunter

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Editor's REPORT

A proposal made to the United Nations by the United States not so long ago is the subject of an article that appears in this issue and which could very easily develop into a "hot potato". Whether it does or not, the facts are worth sober consideration. The title of it is **WHY GUIDED MISSILES CAN NOT BE CONTROLLED**, written by a man who is well known in his field and knows whereof he speaks—but who shall have to remain anonymous as far as what he says here is concerned. The proposal referred to is of a "propagandistic" type which, to any intelligent person, is so faulty that it borders on folly—and perhaps is. If it ever comes to a vote and is adopted, with Russia gleefully accepting, which it would, we could kiss farewell any peace of mind we ever had as individuals or as a nation. The author, whom we shall call "Y", is an authority of long experience on his subject and he tells us exactly the *provable* rea-

sons why this paper still before the United Nations (at this writing) should never be allowed to become a reality.

The singing telegram might have started it all. Perhaps it did. But just before television came into prominence, our radios started vibrating with singing commercials. When television blossomed, advertising became show business in a big way. And because of well-heeled sponsors we can enjoy some fine entertainment. Today, the novelty of television has worn off and audiences are becoming discriminatory, turning off the poorer programs. However, television advertising does sell products and in the future we will have better and better programs. But the fly in the ointment is this: will the commercials ever reach a degree of sanity and palatability. Some are unique and perhaps catchy, but others are downright nauseating and have the effect of making the viewer swear off for life the product it advertises. I think the readers of IF will have to admit that it is rather disconcerting to hear the functions of Burple's Bile Correcting Capsules set to the tune of "Jeannie with the Light Brown Hair" or to hear a few bars of Mozart, Brahms or Beethoven goaded up with somebody's infantile prattle about the merits of an amazing discovery containing X-31785, a magic new ingredient, that miraculously removes old prune pits from the grease trap of your kitchen plumbing. And maybe you can think of some even more ab-

surd. Anyway, what this is preamble to is this: Lloyd Biggle, Jr., who did such a delightful job with the super salesmen of tomorrow in *On The Dotted Line* (June IF), has now turned his satire dripping pen (or typewriter keys, if you will) to the subject of the advertising song writers of tomorrow. Whether *The Tunsmith* is a threat or a promise of what will happen when people tune in their radios or televisions a hundred years from now is something we'll let you decide.

Three years ago, we ran a national collegiate science fiction contest offering \$2000 in prizes for the best novelettes, written by college students, depicting life in America 100 years from now. Of the winners, only Leo Kelley, who placed third, has written a story since then that we have accepted. It ran in the June issue and the title was *The Human Element*. It was about a circus clown—and oddly enough, the marionette which helped pay his way through Wilkes College was a circus clown named “Candy”, star of a local television program. Now 28 years old, he is a native of Kingston, Pennsylvania, which is quite all right, because our beef is with—mail addressed to us (N. Y.) that goes to Kingston, *New Jersey* . . . If you are one who thinks science fiction has to be gimmicked with time or gadgets (and we hope not) read *The Bridge*, by G. G. Revelle, who has given us a dramatic science fiction situation that can happen this afternoon or wake you up tomorrow morning . . .

It has now been definitely established that the satellite, to be launched sometime during the International Geophysical Year by the United States, will be a three-stage rocket. The globule is still there, but when the ultimate satellite is finally designed and launched, refer to your copies of the June and August (1956) issues of IF and see how accurate were James M. Nuding and Paul Vanous in their proposal! . . . In a letter from Aron M. Mathieu, editor of the *Writers 1957 Yearbook*, I was asked this question: “Do you think well-written, hot, spicy sex, when actually part of an *sf* story converts more people into *sf* readers?” I replied that we look on sex entirely from the viewpoint that it must have something to do with the story and must be handled in good taste; that as the main theme of a story, or as an ingredient, we have not found that it converts people into science fiction readers. So, the editorial attitude toward sex around here is simply that of how it's handled. Whether you are “fer” it or “agin” it, here's one way of treating sex which we found rather refreshing: it's called *The Birds and the Bees*, by Dave Fisher, a newcomer to the pages of IF. Sex is not a part of his story, nor is it an ingredient—it is the whole dog-goned story!

Letters inquiring about a *Second World of IF* have begun to arrive. Readers want to know: When? Will it contain novelettes only, a mixture—or what? Well, *what* would you like? —jlk



Illustrated by Ed Emsh

BY LLOYD BIGGLE, JR.

He was a real atomic tunesmith, the boy with the go.

A throwback who knew more music than any man alive.

That made him dangerous . . . too dangerous to live.

EVERYONE CALLS it the Center. It has another name, a long one, that gets listed in government appropriations and can be looked up in the encyclopedia, but no one uses it. From Bombay to Lima, it is—the Center. You can stagger out of the rolling mists of Venus, elbow your way up to a bar, and begin, “When I was at the Center . . .” And every stranger within hearing will listen attentively. You can mention the Center in the depths of London, or on a Martian desert, or at the solitary outpost on Pluto, and know you are understood.

No one ever explains the Center. It isn’t possible, and it isn’t necessary. From the babe in arms to the centenarian looking forward to retirement, everyone has been there,

THE TUNESMITH

and plans to go again next year, and the year after that. It is the vacation land of the Solar System. It is square miles of undulating American middle-west farm land, transfigured by ingenious planning and relentless labor and incredible expense. It is a monumental summary of man's cultural achievements, and like a phoenix, it has emerged suddenly, inexplicably, at the end of the twenty-fourth century, from the corroded ashes of a shocking cultural decay.

The Center is colossal, spectacular and magnificent. It is inspiring, edifying and amazing. It is awesome, it is overpowering, it is—everything.

And though few of its visitors know about this, or care, it is also haunted.

You are standing in the observation gallery of the towering Bach Monument. Off to the left, on the slope of a hill, you see the tense spectators who crowd the Grecian Theatre for Aristophanes. Sunlight plays on their brightly-colored clothing. They watch eagerly, delighted to see in person what millions are watching on visiscope.

Beyond the theatre, the tree-lined Frank Lloyd Wright Boulevard curves off into the distance, past the Dante Monument and the Michelangelo Institute. The twin towers of a facsimile of the Rheims Cathedral rise above the horizon. Directly below, you see the curious landscaping of an eighteenth century French *jardin*, and nearby, the Molière Theatre.

A hand clutches your sleeve, and

you turn suddenly, irritably, and find yourself face to face with an old man.

The leathery face is scarred and wrinkled, the thin strands of hair glistening white. The hand on your arm is a gnarled claw. You stare, take in the slumping contortion of one crippled shoulder and the hideous scar of a missing ear, and back away in alarm.

The sunken eyes follow you. The hand extends in a sweeping gesture that takes in the far horizon, and you notice that the fingers are maimed or missing. The voice is a harsh cackle. "Like it?" he says, and eyes you expectantly.

Startled, you say, "Why, yes. Of course."

He takes a step forward, and his eyes are eager, pleading. "I say, do you like it?"

In your perplexity, you can do no more than nod as you turn to hurry away. But your nod brings a strange response. A strident laugh, an innocent, childish smile of pleasure, a triumphant shout. "I did it! I did it all!"

Or you stand in resplendent Plato Avenue, between the Wagnerian Theatre, where the complete *Der Ring des Nibelungen* is performed daily without interruptions, and the reconstruction of the sixteenth century Globe Theatre, where Shakespearean Drama is present morning, afternoon and evening.

A hand paws at you. "Like it?"

If you respond with a torrent of ecstatic praise, the old man eyes you impatiently, and only waits until you have finished to ask again,

"I say, do you like it?"

But a smile and a nod is met with beaming pride, a gesture, a shout. "I did it!"

In the lobby of one of the thousand spacious hotels, in the waiting room of the remarkable library where a copy of any book you request is reproduced for you free of charge, in the eleventh balcony of Beethoven Hall, a ghost shuffles haltingly, clutches an arm, asks a question.

And shouts proudly, "I did it!"

ERLIN BAQUE sensed her presence behind him, but he did not turn. He leaned forward, his left hand tearing a rumbling bass figure from the multichord while his right hand fingered a solemn melody. With a lightning flip of his hand he touched a button, and the thin treble tones were suddenly fuller, more resonant, almost clarinet-like. ("But God, how unlike a clarinet!" he thought.)

"Must we go through all that again, Val?" he said.

"The landlord was here this morning."

He hesitated, touched a button, touched several buttons, and wove weird harmonies out of the booming tones of a brass choir. (But what a feeble, distorted brass choir!)

"How long does he give us this time?"

"Two days. And the food synthesizer's broken down again."

"Good. Run down and buy some fresh meat."

"With what?"

He slammed his fists down on the keyboard, and shouted above the shattering dissonance. "I will not rent a harmonizer. I will not turn my arranging over to hacks. If a Com goes out with my name on it, it's going to be *composed*. It may be idiotic, and it may be sickening, but it's going to be done right. It isn't much, God knows, but it's all I have left."

He turned slowly and glared at her, this pale, drooping, worn-out woman who had been his wife for twenty-five years. Then he looked away, telling himself stubbornly that he was no more to be blamed than she. When sponsors paid the same rates for good Coms that they paid for hackwork . . .

"Is Hulse coming today?" she asked.

"He told me he was coming."

"If we could get some money for the landlord . . ."

"And the food synthesizer. And a new visiscope. And new clothes. There's a limit to what can be done with one Com."

He heard her move away, heard the door open, and waited. It did not close. "Walter-Walter called," she said. "You're the featured tunesmith on today's Show Case."

"So? There's no money in that."

"I thought you wouldn't want to watch, so I told Mrs. Rennik I'd watch with her."

"Sure. Go ahead. Have fun."

The door closed.

Baque got to his feet, and stood looking down at his chaos-strewn worktable. Music paper, Com-lyric releases, pencils, sketches, half-finished manuscripts were cluttered

together in untidy heaps and overflowed onto the floor. Baque cleared a corner for himself and sat down wearily, stretching his long legs out under the table.

"Damn Hulsey," he muttered. "Damn sponsors. Damn visiscope. Damn Coms."

Compose something. You're not a hack, like the other tunesmiths. You don't punch your melodies out on a harmonizer's keyboard and let a machine harmonize them for you. You're a musician, not a melody monger. Write some music. Write a—a sonata, for multichord. Take the time now, and compose something.

His eyes fell on the first lines of a Com-lyric release. "If your flyer jerks and clowns, if it has its ups and downs . . ."

"Damn landlords," he muttered, reaching for a pencil.

The tiny wall clock tinkled the hour, and Baque leaned over to turn on the visiscope. A cherub-faced master of ceremonies smiled out at him ingratiatingly. "Walter-Walter again, ladies and gentlemen. It's Com time on today's Show Case. Thirty minutes of Commercials by one of today's most talented tunesmiths. Our Com spotlight is on—"

A noisy brass fanfare rang out, the tainted brass tones of a multichord.

"Erlin Baque!"

The multichord swung into an odd, dipsey melody Baque had done five years before, for *Tamper Cheese*, and a scattering of applause sounded in the background. A nasal soprano voice mouthed the

words, and Baque groaned unhappily. "We age our cheese, and age it, age it, age it, the old-fashioned way . . ."

Walter-Walter cavorted about the stage, moving in time with the melody, darting down into the audience to kiss some sedate housewife-on-a-holiday, and beaming at the howls of laughter.

The multichord sounded another fanfare, and Walter-Walter leaped back onto the stage, both arms extended over his head. "Now listen to this, all you beautiful people. Here's your Walter-Walter exclusive on Erlin Baque." He glanced secretively over his shoulder, tiptoed a few steps closer to the audience, placed his finger on his lips, and then called out loudly, "Once upon a time there was another composer named Baque, spelled B-A-C-H, but pronounced Baque. He was a real atomic propelled tunesmith, the boy with the go, according to them that know. He lived some four or five or six hundred years ago, so we can't exactly say that that Baque and our Baque were Baque to Baque. But we don't have to go Baque to hear Baque. We like the Baque we've got. Are you with me?"

Cheers. Applause. Baque turned away, hands trembling, a choking disgust nauseating him.

"We start off our Coms by Baque with that little masterpiece Baque did for Foam Soap. Art work by Bruce Combs. Stop, look—and *listen!*"

Baque managed to turn off the visiscope just as the first bar of soap jet propelled itself across the screen.

He picked up the Com lyric again, and his mind began to shape the thread of a melody.

"If your flyer jerks and clowns, if it has its ups and downs, ups and downs, ups and downs, you need a **WARING!**"

He hummed softly to himself, sketching a musical line that swooped and jerked like an erratic flyer. Word painting, it was called, back when words and tones meant something. Back when the B-A-C-H Baque was underscoring such grandiose concepts as heaven and hell.

Baque worked slowly, now and then checking a harmonic progression at the multichord and rejecting it, straining his mind for some fluttering accompaniment pattern that would simulate the sound of a flyer. But then—no. The Waring people wouldn't like that. They advertised that their flyers were noiseless.

He was suddenly aware of urgently-sounding door chimes. He walked over to flip on the scanner, and Hulsey's pudgy face grinned out at him.

"Come on up," Baque told him. Hulsey nodded, and disappeared.

Five minutes later he waddled through the door, sank into a chair that sagged dangerously under his bulky figure, plunked his briefcase on the floor, and mopped his face. "Whew! Wish you'd get yourself on a lower level. Or into a building with some modern conveniences. Those elevators scare me to death!"

"I'm thinking of moving," Baque said.

"Good. It's about time."

"But it'll probably be somewhere

higher up. The landlord has given me two days' notice."

Hulsey winced, and shook his head sadly. "I see. Well, I won't keep you in suspense, then. Here's the check for the Sana-Soap Com."

Baque took the check, glanced at it, and scowled.

"You were behind in your guild dues," Hulsey said. "Have to deduct them, you know."

"Yes. I'd forgotten."

"I like to do business with Sana-Soap. Cash right on the line. Too many companies wait until the end of the month. Sana-Soap wants a couple of changes, but they paid anyway." He snapped open the briefcase, and pulled out a folder. "You've got some sly bits in this, Erlin my boy. They like it. Particularly this 'sudsey, sudsey, sudsey' thing in the bass. They kicked on the number of singers, at first, but not after they heard it. Now right here they want a break for a straight announcement."

Baque glanced, and nodded. "How about keeping the 'sudsey, sudsey' ostinato going as a background to the announcement?"

"Sounds good. That's a sly bit, that—what'd you call it?"

"Ostinato."

"Ah—yes. Wonder why the other tunesmiths don't work in bits like that."

"A harmonizer doesn't produce effects," Baque said dryly. "It just—harmonizes."

"You give them about thirty seconds of that 'sudsey' for background. They can cut it if they don't like it."

Baque nodded, and scribbled a

note on the manuscript.

"And the arrangement," Hulsey went on. "Sorry, Erlin, but we can't get a French horn player. You'll have to do something else with that part."

"No horn player? What's wrong with Rankin?"

"Blacklisted. The Performers' Guild has him blacklisted. He went out to the west coast to play. Played for nothing, and even paid his own expenses, so they blacklisted him."

"I remember," Baque said softly. "The Monuments of Art Society. He played a Mozart Horn Concerto for them. Their last concert, too. Wish I could have heard it, even if it was with multichord."

"He can play it all he wants to, now, but he'll never get paid for playing again. You can work that horn part into the multichord line, or I might be able to get you a trumpet player. He could use a converter."

"It'll ruin the effect."

Hulsey chuckled. "Sounds the same to everyone but you, my boy. I can't tell the difference. We got your violins, and a cello player. What more do you want?"

"Doesn't the London Guild have a horn player?"

"You want me to bring him over for one three-minute Com? Be reasonable, Erlin! Can I pick this up tomorrow?"

"Yes. I'll have it ready in the morning."

Hulsey reached for his briefcase, dropped it again, and leaned forward. "Erlin, I'm worried about you. I have twenty-seven tunesmiths in my agency. You make the

least money of any of them. Your net last year was twenty-two hundred. The next-highest netted eleven thousand."

"That isn't news to me," Baque said.

"This may be. You have as many accounts as any of the others. Did you know that?"

"No," Baque said. "No, I didn't know that."

"That's right. You have as many accounts, but you don't make any money. Want to know why? Two reasons. You spend too much time on a Com, and you write it too well. Sponsors can use one of your Coms for months—or sometimes even years, like that Tamper Cheese thing. People like to hear them. Now if you just didn't write so damned well, you could work faster, and the sponsors would have to use more of your Coms, and you could turn out more."

"I've thought about that. Even if I didn't, Val would keep reminding me. But it's no use. That's the way I have to work. If there was some way to get the sponsors to pay more for a *good* Com . . ."

"There isn't. The guild wouldn't stand for it, because good Coms mean less work, and most tunesmiths couldn't write a really good Com. Now don't think I'm concerned about my agency. Of course I make more money when you make more, but I'm doing well enough with my other tunesmiths. I just hate to see my best man making so little money. You're a throwback, Erlin. You waste time and money collecting those antique—what do you call them?"

"Phonograph records."

"Yes. And those moldy old books about music. I don't doubt that you know more about music than any living man, and what does it get you? Not money, certainly. You're the best there is, and you keep trying to be better, and the better you get the less money you make. Your income drops lower every year. Couldn't you manage to be mediocre now and then?"

"No," Baque said. "I couldn't manage it."

"Think it over."

"These accounts I have. Some of the sponsors really like my work. They'd pay more, if the guild would let them. Supposing I left the guild?"

"You can't, my boy. I couldn't handle your stuff—not and stay in business long. The Tunsmiths' Guild would put on the pressure, and the Performers' and Lyric Writers' Guilds would blacklist you. Jimmy Denton plays along with the guilds, and he'd bar your stuff from visiscope. You'd lose all your accounts—fast. No sponsor is big enough to fight all that trouble, and none of them would want to bother. So just try to be mediocre now and then. Think about it."

Baque sat staring at the floor. "I'll think about it."

Hulsey struggled to his feet, clasped Baque's hand briefly, and waddled out. Baque got up slowly, and opened the drawer where he kept his meager collection of old phonograph records. Strange and wonderful music.

Three times in his career, Baque had written Coms that were a full

half-hour in length. On rare occasions he got an order for fifteen minutes. Usually he was limited to five, or less. But composers like the B-A-C-H Baque wrote things that lasted an hour or more—even wrote them without lyrics.

And they wrote for real instruments, even some amazing-sounding instruments that no one played any more, like bassoons, and piccolos and pianos.

"Damn Denton. Damn visiscope. Damn the guilds."

Baque rummaged tenderly among the discs until he found one bearing Bach's name. *Magnificat*. Then, because he felt too despondent to listen, he pushed it away.

Six months before the Performers' Guild had blacklisted its last oboe player. Now its last horn player, and there just weren't any young people learning to play instruments. Why should they, where there were so many marvelous contraptions that ground out the Coms without any effort on the part of the performer? Even multichord players were becoming scarce, and the multichord could, if one desired, practically play itself.

Baque stood looking uncertainly about the room, from multichord to worktable to the battered plastic bookcase that held his old books on music. The door jerked open, and Val hurried in.

"Did Hulsey . . ."

Baque handed her the check. She took it eagerly, glanced at it, and looked up in dismay.

"My guild dues," he said. "I was behind."

"Oh. Well, it's a help, anyway."

Her voice was flat, emotionless, as if one more disappointment really didn't matter. They stood facing each other awkwardly.

"I watched part of *Morning with Marigold*," Val said. "She talked about your Coms."

"I should hear soon on that Slo-Smoke Com," Baque said. "Maybe we can hold the landlord off for another week. Right now—I'm going to walk around a little."

"You should get out more . . ."

He closed the door behind him, slicing her sentence off neatly. He knew what followed. Get a job somewhere. Be good for your health to get out of the apartment a few hours a day. Write Coms in your spare time—they don't bring in more than a part-time income, anyway. At least do it until we get caught up. All right. If you won't, I will.

But she never did. A prospective employer never wanted more than one look at her slight body and her worn, sullen face. And Baque doubted that he would receive any better treatment.

He could get work as a multicord player, and make a good income. But then he'd have to join the Performers' Guild, which meant he'd have to resign from the Tunsmiths' Guild. So if he did that he could no longer write Coms.

"Damn Coms!"

When he reached the street, he stood for a moment watching the crowds shooting by on the swiftly-moving conveyer. A few people glanced at him, and saw a tall, gawky, balding man in a frayed, badly-fitting suit. Baque hunched

up his shoulders, and walked awkwardly along the stationary sidewalk. They would consider him just another derelict from a shabby neighborhood, he knew, and they would quickly look the other way while they hummed a snatch from one of his Coms.

He turned in at a crowded restaurant, found a table at one side, and ordered a beer. On the rear wall was an enormous visiscope screen, where the Coms followed each other without interruption. Baque listened to the Coms for a time, first curious to see what the other tunsmiths were doing, and then disgusted. Around him, the customers watched and listened while they ate. Some of them nodded their heads jerkily in time with the music. A few young couples were dancing on the small dance floor, skillfully changing steps as the music shifted from one Com to another.

Baque watched them sadly, and thought about the way things had changed. At one time, he knew, there had been special music for dancing, and special groups of instruments to play it. And people had gone to concerts by the thousands, sitting in seats with nothing to look at but the performers.

All of it was gone. Not only the music, but art, and literature, and poetry. The plays he had read in his grandfather's school books were forgotten.

James Denton's *Visiscope International* decreed that people must look and listen at the same time. James Denton's *Visiscope International* decreed that the public

attention span wouldn't tolerate long programs. So there were Coms.

Damn Coms!

When Val returned to the apartment an hour later, Baque was sitting in the corner staring at the crumbly volumes he had collected from the days when books were still printed on paper—a scattering of biographies, books on music history, and technical books on music theory and composition. Val looked twice around the room before she noticed him, and then she confronted him anxiously, stark tragedy written on her face.

"The man's coming to fix the food synthesizer."

"Good," Baque said.

"But the landlord won't wait. If we don't pay him day after tomorrow—pay him everything—we're out."

"So we're out."

"Where will we go? We can't get in anywhere without paying something in advance."

"So we won't get in anywhere."

She fled sobbing into the bedroom.

THE NEXT morning Baque resigned from the Tunersmiths' Guild and joined the Performers' Guild. Hulse's round face drooped mournfully when he heard the news. He loaned Baque enough money to pay his guild registration fee and quiet the landlord, and expressed his sorrow in eloquent terms as he hurried Baque out of his office. He would, Baque knew, waste no time in assigning Baque's clients to his other tune-

smiths—to men who worked faster and not so well.

Baque went to the guild hall, where he sat for five hours waiting for a multichord assignment. He was finally escorted into the secretary's office, and brusquely motioned into a chair. The secretary eyed him suspiciously.

"You belonged to the Performers' Guild twenty years ago, and you left it to become a tunesmith. Right?"

"Right," Baque said.

"You lost your seniority after three years. You knew that, didn't you?"

"I didn't, but I didn't think it mattered. There aren't many good multichord players around."

"There aren't many good jobs around, either. You'll have to start at the bottom." He scribbled on a slip of paper, and thrust it at Baque. "This one pays well, but we have a hard time keeping a man there. Lankey isn't easy to work for. If you don't irritate him too much—well, then we'll see."

Baque found himself outside the door, staring hard at the slip of paper.

He rode the conveyer out to the New Jersey Space Port, floundered about through a rattle-trap slum area getting his directions hopelessly confused, and finally found the place almost within radiation distance of the port. The sprawling building had burned at some time in the remote past. Stubby remnants of walls rose out of the weed-choked rubble. A walk curved back from the street towards a dimly lit

cavity at one corner of the building. Steps led uncertainly downwards. Overhead, an enormous sign pointed its flowing colors in the direction of the port. The *Lankey-Pank Out*.

Baque stepped through the door, and faltered at the onslaught of extraterrestrial odors. Lavender-tinted Venusian tobacco smoke hung like a limp blanket midway between floor and ceiling. The revolting, cutting fumes of Martian Whiskey staggered him. He had a glimpse of a scattered gathering of tough spacers and tougher prostitutes before the doorman planted his bulky figure and scarred caricature of a face in front of him.

"You looking for someone?"

"Mr. Lankey."

The doorman jerked a thumb towards the bar, and noisily stumbled back into the shadows. Baque walked towards the bar.

He had no trouble picking out Lankey. The proprietor sat on a tall stool behind the bar, and thrust his bald head forward to watch him coldly as he approached. In the dim, smoke-streaked light his taut pale face had a spectral grimness. He planted one elbow on the bar, fingered his flattened stump of a nose with the two remaining fingers on one hairy hand, and stared at Baque with burning, bloodshot eyes.

"I'm Erlin Baque," Baque said.

"Yeh. The multichord player. Can you play that multichord, fellow?"

"Why, yes, I can play . . ."

"That's what they all say. And I've had maybe two in the last five

years that could really play. Most of them come out here figuring they'll set the thing on automatic, and fuss around with one finger. I want that multichord *played*, fellow, and I'll tell you right now—if you can't play you might as well jet for home base, because there isn't any automatic on my multichord. I had it disconnected."

"I can play," Baque told him.

"All right. I'll find out soon enough. The guild rates this place as Class Four, but I pay Class One rates if you can play. If you can really play, I'll slip you some bonuses the guild won't know about. Hours are from six P.M. to six A.M., but you get plenty of breaks, and if you get hungry or thirsty just ask for what you want. Only go easy on the hot stuff. I won't do with a drunk multichord player, no matter how good he is. Rose!"

He bellowed a second time, and a woman stepped out of a door at the side of the room. She wore a faded dressing gown, and her tangled hair hung untidily about her shoulders. She turned a small, pretty face towards Baque, and studied him boldly.

"Multichord," Lankey said. "Show him."

Rose beckoned, and Baque followed her towards the rear of the room. Suddenly he stopped in amazement.

"What's the matter?" Rose said.

"No visiscope!"

"No. Lankey says the spacers want better things to look at than soap suds and air cars." She giggled. "Something like me, for example."

"I never heard of a restaurant without visiscope."

"Neither did I, until I came here. But Lankey's got three of us to sing the Coms, and you're to do the multichord with us. I hope you make the grade. We haven't had a multichord player for a week, and it's hard singing without one."

"I'll make out all right," Baque said.

A narrow platform stretched across the end of the room, where any other restaurant Baque had seen had its visiscope screen. There had been one here at one time, he noticed. He could see the unpatched scars in the wall where it had been torn out.

"Lankey ran a joint on Venus back when they didn't have visiscope there," Rose said. "He has his own ideas about how to entertain customers. Want to see your room?"

Baque did not answer. He was examining the multichord. It was a battered old instrument, and it bore the marks of more than one brawl. He fingered the filter buttons, and swore softly to himself. Most of them were broken. Only the flute and violin filters clicked into place properly. So he would have to spend twelve hours a day with the twanging tones of an unfiltered multichord.

"Want to see your room?" Rose said again. "It's only five. Might as well relax before we have to go to work."

Rose showed him a cramped enclosure behind the bar. He stretched out on a hard cot and tried to relax, and then it was six

o'clock, and Lankey stood in the door beckoning at him.

He took his place at the multichord, and sat fingering the keys. He felt no nervousness. There wasn't anything he didn't know about Coms, and he knew he wouldn't have trouble with the music. But the atmosphere disturbed him. The haze of smoke was thicker, and he blinked his smarting eyes and felt the whiskey fumes tear at his nostrils when he took a deep breath.

There was still only a scattering of customers—mechanics in grimy work suits, swaggering pilots, a few civilians who liked their liquor strong and didn't mind the surroundings. And women. Two women, he guessed, for every man in the room.

There was a sudden stirring, a yelp of approval, and an unrestrained stomping of feet. Lankey was crossing the platform with Rose, and the other singers. Baque's first horrified impression was that the girls were nude, but as they came closer he made out their brief plastic costumes. Lankey was right, he thought. The spacers would much prefer looking at that to animated Coms on a visiscope screen.

"You met Rose," Lankey said. "This is Zanna and Mae. Let's get going."

He walked away, and the girls gathered around the multichord. "What Coms do you know?" Rose said.

"I know them all."

She looked at him doubtfully. "We sing together, and then we

take turns. You're—sure you know them all?"

Baque flipped on the power, and sounded a chord. "You sing, and I'll handle this."

"We'll start out with a Tasty-Malt Com. It goes like this." She hummed softly. "Know that one?"

"I wrote it," Baque said.

They sang better than he had expected. He followed them easily, and was able to keep his eyes on the customers. Heads were jerking in time with the music, and he quickly caught the mood and began to experiment. His fingers shaped a rolling rhythm in the bass, fumbled with it tentatively, and then expanded it. He abandoned the melodic line, leaving the girls to carry on by themselves while he searched the entire keyboard to ornament the driving rhythm.

Feet began to stomp. The girl's bodies were swaying wildly, and Baque felt himself rocking back and forth as the music swept on recklessly. The girls finished their lyrics, and when he did not stop they started in again. Spacers were on their feet, now, clapping and swaying. Some seized their women and began dancing in the narrow spaces between the tables. Finally Baque forced a cadence and slumped forward, panting and mopping his forehead. One of the girls collapsed on the stage, and the others hauled her upright. They fled to a frenzy of applause.

Baque felt a hand on his shoulder. Lankey. His ugly, expressionless face eyed Baque, turned to study the wildly enthusiastic customers, turned back to Baque. He

nodded, and walked away.

Rose came back alone, still breathing heavily. "How about a Sally Ann Perfume Com?"

"Tell me the words," Baque said.

She recited them tonelessly. A tragic little story about the shattered romance of a girl who did not use Sally Ann. "Shall we make them cry?" Baque said. "Just concentrate on that. It's a sad story, and we're going to make them cry."

She stood by the multichord, and sang plaintively. Baque fashioned a muted, tremulous accompaniment, and when the second verse started he improvised a drooping countermelody. The spacers sat in hushed suspense. The men did not cry, but some of the women sniffed audibly, and when Rose finished there was a taut silence.

"Quick," Baque hissed. "We'll brighten things up. Sing something—anything!"

She launched into another Com, and Baque brought the spacers to their feet with the driving rhythm of his accompaniment.

The other girls took their turns, and Baque watched the customers detachedly, bewildered at the power that surged in his fingers. He carried them from one emotional extreme to the other, and back again, improvising, experimenting. And his mind fumbled haltingly with an idea.

"Time for a break," Rose said finally. "Better get something to eat."

Seven-thirty. An hour and a half of continuous playing. Baque felt drained of strength and emo-

tion, and he accepted his dinner tray indifferently and took it to the enclosure they called his room. He did not feel hungry. He sniffed doubtfully at the food, tasted it—and ate ravenously. Real food, after months of synthetics!

He sat for awhile on the cot, wondering how much time the girls took between appearances. Then he went looking for Lankey.

"I don't like sitting around," he said. "Any objection to my playing?"

"Without the girls?"

"Yes."

Lankey planted both elbows on the bar, cupped his chin in one fist, and sat looking absently at the far wall. "You going to sing yourself?" he said finally.

"No. Just play."

"Without any singing? Without words?"

"Yes."

"What will you play?"

"Coms. Or I might improvise something."

A long silence. Then—"Think you could keep things moving while the girls are out?"

"Of course I could."

Lankey continued to concentrate on the far wall. His eyebrows contracted, relaxed, and contracted again. "All right," he said. "I was just wondering why I never thought of it."

Unnoticed, Baque took his place at the multichord. He began softly, making the music an unobtrusive background to the rollicking conversation that filled the room. As he increased the volume, faces turned in his direction.

He wondered what those people were thinking, hearing for the first time music that was not a Com, music without words. He watched intently, and satisfied himself that he was holding their attention. Now—could he bring them out of their seats with nothing more than the sterile tones of a multichord? He gave the melody a rhythmic snap, and the stomping began.

As he increased the volume again, Rose came stumbling out of a doorway and hurried across the stage, perplexity written on her pert face.

"It's all right," Baque told her. "I'm just playing to amuse myself. Don't come back until you're ready."

She nodded, and walked away. A red-faced spacer near the platform looked up at the revealed outline of her young body, and leered. Fascinated, Baque studied the coarse, demanding lust in his face, and searched the keyboard to express it. This? Or—this? Or—

He had it. His body rocked as he felt himself caught up in the relentless rhythm. His foot tightened on the volume control, and he turned to watch the customers.

Every pair of eyes stared hypnotically at his corner of the room. A bartender stood at a half crouch, mouth agape. There was uneasiness, a strained shuffling of feet, a restless scraping of chairs. Baque's foot dug harder at the volume control.

Terrified, he sat watching the scene that erupted below him. Lasciviousness twisted every face. Men were on their feet, reaching

for the women, clutching, pawing. A chair crashed to the floor, and a table, and no one seemed to notice. A woman's dress fluttered crazily downwards, and the pursued were pursuers while Baque's fingers raced onward, out of control.

With a violent effort he wrenched his hands from the keys, and the moment of silence crashed into the room like thunder. Fingers trembling, he began to play softly, indifferently. Order was restored when he looked again, the chair and table were upright, and the customers were seated in apparent relaxation—except for one woman, struggling back into her dress in obvious embarrassment.

Baque continued to play quietly until the girls returned.

Six A.M. Body aching with weariness, hands aching, legs cramped, Baque climbed down from the multichord. Lankey stood waiting for him.

"Class One rates," he said. "You've got a job with me as long as you want it. But take it a little easy with that stuff, will you?"

Baque thought about Val, cramped in the dreary apartment, eating synthetic food. "Would I be out of order to ask for an advance?"

"No," Lankey said. "Not out of order. I told the cashier to give you a hundred on your way out. Call it a bonus."

Weary from his long conveyer ride, Baque walked quietly into his dim apartment and looked about. No sign of Val—she would still be sleeping. He sat down at his own multichord and touched the keys.

Unbelievable. Music without Coms, without words, could make people laugh and cry, and dance, and cavort madly.

And it could turn them into lewd animals.

Wonderingly he played the music that had incited such unconcealed lust, played it louder, and louder . . .

And felt a hand on his shoulder, and turned to look into Val's passion-twisted face.

He asked Hulsey to come and hear him that night, and later Hulsey sat slumped on the cot in his room, and shuddered. "It isn't right. No man should have that power over people. How do you do it?"

"I don't know," Baque said. "I saw that young couple sitting there, and they were happy, and I felt their happiness. And as I played everyone in the room was happy. And then another couple came in, quarreling, and the next thing I knew I had everyone mad."

"Almost started a fight at the next table," Hulsey said. "And what you did after that . . ."

"Yes. But not as much as I did last night. You should have seen it last night."

Hulsey shuddered again.

"I have a book about Greek music," Baque said. "Ancient Greece—way back. They had something they called *ethos*. They thought that the different musical scales affected people in different ways. Music could make men sad, or happy, or enthused—or drive them crazy. They even claimed that a musician named Orpheus could

move trees and soften rocks with his music. Now listen. I've had a chance to experiment, and I've noticed that my playing is most effective when I don't use the filters. There are only two filters that work on that multichord, anyway—flute and violin—but when I use either of them the people don't react so strongly. I'm wondering if it wasn't the Greek instruments, rather than the scales, that produced those effects. I'm wondering if the tone of an unfiltered multichord doesn't have something in common with the tone of the ancient Greek *kithara* or *aulos*."

Hulsey grunted. "I don't think it's instruments, or scales, either. I think it's Baque, and I don't like it. You should have stayed a tunesmith."

"I want you to help me," Baque said. "I want to find a place where we can put a lot of people—a thousand, at least—not to eat, or watch Coms, but just to listen to one man play on a multichord."

Hulsey got up abruptly. "Baque, you're a dangerous man. I'm damned if I'll trust any man who can make me feel the way you made me feel tonight. I don't know what you're trying to do, but I won't have any part of it."

He stomped away in the manner of a man about to slam a door. But a male multichordist in the *Lankey-Pank Out* did not rate the luxury of a door on his room. Hulsey paused uncertainly in the doorway, and disappeared. Baque followed, and stood watching him weave his way impatiently past the tables towards the exit.

From his place behind the bar, Lankey looked at Baque, and glanced after the disappearing Hulsey. "Troubles?" he said.

Baque turned away wearily. "I've known that man for twenty years. I never thought he was my friend. But then—I never thought he was my enemy, either."

"It works out that way, sometimes," Lankey said.

Baque shook his head. "I'd like to try some Martian whiskey. I've never tasted the stuff."

TWO WEEKS made Baque an institution at the *Lankey-Pank Out*, and the place was jammed to capacity from the time he went to work until he left the next morning. When he performed alone, he forgot about the Coms, and played what he wanted. He'd even played some pieces by Bach for the customers, and received generous applause—though nothing like the tumultuous enthusiasm that followed his improvisations.

Sitting behind the bar, eating his evening meal and watching the customers, Baque felt vaguely happy. For the first time in years he had plenty of money. He enjoyed the work he was doing.

And he had begun to wonder how he could go about eliminating the Coms altogether.

As Baque pushed aside his tray, he saw Biff the doorman step forward to greet another pair of customers, halt suddenly, and back away in stupefied amazement. And no wonder—evening clothes at the *Lankey-Pank Out!*

The couple strolled into the room, blinking in the dim, smoke-tinted light, and looking about curiously. The man was bronze and handsome, but no one noticed him. The woman's striking beauty flashed like a meteor against the drab surroundings. She moved in an aura of shining loveliness. Her fragrance routed the foul tobacco and whiskey odors. Her hair gleamed golden, her shimmering, flowing gown clung seductively to her voluptuous figure.

Baque stared, and suddenly recognized her. Marigold, of *Morning with Marigold*. Worshiped around the Solar System by the millions of devotees to her visiscope program. Mistress, it was said, to James Denton, the czar of visiscope. Marigold Manning.

She raised her hand to her mouth in mock horror, and the bright tones of her laughter dropped tantalizingly among the spellbound spacers.

"What an odd place," she said. "Where did you ever hear about a place like this?"

"I need some Martian whiskey, damn it," the man muttered.

"So stupid of the Port Bar to run out. With all those ships from Mars coming in, too. Are you sure we can get back in time? Jimmy'll raise hell if we aren't there when his ship lands."

Lankey touched Baque's arm. "After six," he said, without taking his eyes from Marigold Manning. "They'll be getting impatient."

Baque nodded, and started for the multichord. And as soon as the customers saw him, the tumult be-

gan. He paused before taking his seat, and saw Marigold Manning and her escort staring open-mouthed. The sudden uproar had brought them up short, and they turned from the stomping, howling customers to examine this nondescript man who inspired such undignified enthusiasm.

Miss Manning's exclamation rang out sharply above the noise. "What the hell!"

Baque shrugged, and started to play. When Miss Manning finally left, after a brief conference with Lankey, her escort still hadn't gotten his Martian whiskey.

The next evening Lankey greeted Baque with both fists full of telenotes. "What a hell of a mess this is! You see this Marigold dame's program this morning?"

"Don't think I've watched visiscope since I came to work here."

"In case it interests you, you were—what does she call it?—a 'Marigold Exclusive' on visiscope this morning. Erlin Baque, the famous tunesmith, is now playing the multichord in a queer little restaurant called the *Lankey-Pank Out*. If you want to hear some amazing music, wander out by the New Jersey Space Port, and hear Baque. Don't miss it. The experience of a lifetime." Lankey swore, and waved the telenotes. "Queer, she calls us. Now I've got ten thousand requests for reservations, some from as far away as Budapest and Shanghai. And our capacity is five hundred, counting standing room. Damn that woman! We already had all the business we could handle."

"You need a bigger place," Baque said.

"Yes. Well, confidentially, I've got my eye on a big warehouse. It'll seat a thousand, at least. We'll clean up. I'll give you a contract to take charge of the music."

Baque shook his head. "How about opening a big place up town? Attract people that have more money to spend. You run it, and I'll bring in the customers."

Lankey caressed his flattened nose solemnly. "How do we split?"

"Fifty-fifty," Baque said.

"No," Lankey said thoughtfully. "I play fair, Baque, but fifty-fifty wouldn't be right on a deal like that. I'd have to put up all the money myself. I'll give you one-third, and you're to handle the music."

They had a lawyer draw up a contract. Baque's lawyer. Lankey insisted on that.

In the bleak grey of early morning Baque sleepily rode the crowded conveyer towards his apartment. It was the rush hour, when commuters jammed against each other and snarled grumpily when a neighbor shifted his feet. Was the crowd heavier than usual? Baque shrugged off the jostling and elbowing, and lost himself in thought.

It was time he found a better place to live. He hadn't minded the dumpy apartment as long as he couldn't afford a better place, but Val had been complaining for years. And now when they could move, when they could have a luxury apartment or even a small

home over in Pennsylvania, Val refused to go. Didn't want to leave her friends, she said.

Baque mulled over this problem of feminine contrariness, and realized suddenly that he was approaching his own stop. He started to push his way towards a deceleration strip—he shoved firmly, he attempted to step between his fellow riders, he applied his elbows, gently, at first, and then viciously. The crowd about him did not yield.

"I beg your pardon," Baque said, making another attempt. "I get off here."

This time a pair of brawny arms barred his way. "Not this morning, Baque. You got an appointment up town."

Baque flung a glance at the circle of faces about him. Hard faces, grim, grinning faces. With a sudden effort Baque hurled himself sideways, fighting with all his strength—and was hauled back roughly.

"Up town, Baque. If you want to go dead, that's your affair."

"Up town," Baque agreed.

At a public air strip they left the conveyer. A flyer was waiting for them, a plush, private job that displayed a high-priority X registration number. They flew swiftly towards down-town Manhattan, cutting recklessly across the air lanes, and veered in for a landing on the towering *Visiscope International* Building. Baque was bundled down an anti-gravity shaft, led through a labyrinth of corridors, and prodded none too gently into an office.

A huge office. It was sparsely furnished, with a desk, some chairs, a bar in the far corner, an enor-

mous visiscope screen—and a multichord. It was crowded. Baque's gaze swept the blur of faces and found one that was familiar. Hulsey.

The plump agent took two steps forward, and stood glaring at Baque. "Day of reckoning, Erlin," he said coldly.

A hand rapped sharply on the desk. "I take care of any reckoning that's done around here, Hulsey. Please sit down, Mr. Baque."

Baque arranged himself uncomfortably on the chair that was thrust forward from somewhere. He waited, his eyes on the man behind the desk.

"My name is James Denton. Does my fame extend to such out-of-the-way places as the *Lankey-Pank Out*?

"No," Baque said. "But I've heard of you."

James Denton. Czar of *Visiscope International*. Ruthless arbitrator of public taste. He was no more than forty, with a swarthy, handsome face, flashing eyes, and a ready smile.

He nodded slowly, tapped a cigar on the edge of his desk, and carefully placed it in his mouth. Men on either side of him extended lighters. He chose one without glancing up, nodded again, and puffed deeply.

"I won't bore you with introductions to this gathering, Baque. Some of these men are here for professional reasons. Some are here because they're curious. I heard about you for the first time yesterday, and what I heard made me think you might be a

problem. Mind you, I said 'might be'—that's what I aim to find out.

"When I have a problem, Baque, I do one of two things. I solve it, or I eliminate it, and I waste no time either way." He chuckled. "As you can see from the fact that I had you brought in at the earliest moment you were—shall we say—available?"

"The man's dangerous, Denton!" Hulsey blurted out.

Denton flashed his smile. "I like dangerous men, Hulsey. They're useful to have around. If I can use whatever it is Mr. Baque has, I'll make him an attractive offer. I'm sure he'll accept it gratefully. If I can't use it, I aim to make damned certain that he won't be inconveniencing me. Do I make myself clear, Baque?"

Baque stared at the floor, and said nothing.

Denton leaned forward. His smile did not waver, but his eyes narrowed, and his voice was suddenly icy. "Do I make myself clear, Baque?"

"Yes," Baque muttered weakly.

Denton jerked a thumb towards the door, and half of those present, including Hulsey, solemnly filed out. The others waited, talking in whispers, while Denton puffed steadily on his cigar. Suddenly Denton's intercom rasped out a single word. "Ready!"

Denton pointed at the multichord. "We crave a demonstration of your skill, Mr. Baque. And take care that it's a good demonstration. Hulsey is listening, and he can tell us if you try to stall."

Baque nodded, and took his place

at the multichord. He sat with fingers poised, and grinned at the circle of staring faces. Overlords of business, they were, and never in their lives had they heard real music. As for Hulsey—yes, Hulsey would be listening, but over Denton's intercom, over a communication system designed to carry voices!

And Hulsey had a terrible ear for music.

Still grinning, Baque touched the violin filter, touched it again, and faltered.

Denton chuckled dryly. "I neglected to inform you, Mr. Baque. On Hulsey's advice, we've had the filters disconnected. Now—"

Anger surged within Baque. He jammed his foot down hard on the volume control, insolently tapped out a visiscope fanfare, and started to play his Tamper Cheese Com. Face flushed, Denton leaned forward and snarled something. The men beside him stirred uneasily. Baque shifted to another Com, improvised some variations, and began to watch the faces around him. Overlords of the business world. It would be amusing, he thought, to make them dance and stomp their feet. His fingers shaped a compelling rhythm, and they began to sway restlessly.

Suddenly he forgot his caution. Laughing silently to himself, he released an overpowering torrent of sound that set the men dancing. He froze them in ridiculous postures with an outburst of surging emotion. He made them stomp recklessly, he brought tears to their eyes, and he finished off with the pound-

ing force that Lankey called the 'Sex Music.'

Then he slumped over the keyboard, terrified at what he had done.

Denton was on his feet, face pale, hands clenching and unclenching. "My God!" he muttered.

He snarled a word at his intercom. "Reaction?"

"Negative," came the prompt answer.

"Let's wind it up."

Denton sat down, passed his hand across his face, and turned to Baque with a bland smile. "An impressive performance, Mr. Baque. We'll know in a few minutes—ah, here they are."

Those who had left earlier filed back into the room, and several men huddled together in a whispered conference. Denton got up from his desk, and paced the floor. The other men in the room, including Hulsey, remained standing and waited awkwardly.

Baque kept his place at the multichord, glancing uneasily about the room. In shifting his position he accidentally touched a key, and the single tone shattered the poise of the conferees, spun Denton around wildly, and startled Hulsey into two steps towards the door.

"Mr. Baque is getting impatient," Denton called. "Can't we finish this?"

"One moment, sir."

They returned, finally, and arranged themselves in two lines in front of Denton's desk. The spokesman, a white-haired, scholarly looking man with a delicate pink complexion, cleared his throat self-con-

sciously, and waited for Denton's nod.

"It is established," he said, "that those in this room were powerfully affected by the music. Those listening on the intercom experienced no reaction except a mild boredom."

"Any fool could figure that out," Denton snapped. "How does he do it?"

"We can only offer a working hypothesis . . ."

"So you're guessing. Let's have it."

"Erlin Baque has the ability to telepathically project his emotional experience. When the projection is subtly reinforced by the tones of the multichord, the experience of those in his immediate presence is intense. It has no effect upon those listening to his music at a distance."

"And—visiscope?"

"Baque's playing would have no effect upon visiscope listeners."

"I see," Denton said. He scowled thoughtfully. "What about his long-term success?"

"It is difficult to predict . . ."

"Predict, damn it!"

"The novelty of his playing would attract attention, at first. In time he might develop a group of followers who would use the emotional experience of his playing as a kind of narcotic."

"Thank you, gentlemen," Denton said. "That will be all."

The room emptied quickly. Hulseley paused in the doorway, glared hatefully at Baque, and then walked out meekly.

"So I can't use you, Baque," Denton said. "But it seems you are

no problem. I know what you and Lankey are up to. If I say the word, you would never, in this lifetime, find a place for your new restaurant. I could have the *Lankey-Pank Out* closed down by evening. But it would hardly be worth the trouble. I won't even insist on a visiscope screen in your new restaurant. If you can develop a cult for yourself, why—perhaps it will keep the members out of worse mischief. You see I feel generous this morning, Baque. Now you'd better leave before I change my mind."

Baque nodded, and got to his feet. At that moment Marigold Manning swept into the room, radiantly lovely, exotically perfumed, her glistening blonde hair swept up into the latest Martian hair style.

"Jimmy, darling—oh!"

She stared at Baque, stared at the multichord, and stammered, "Why, you're—you're—Erlin Baque! Jimmy, why didn't you tell me?"

"Mr. Baque has been favoring me with a private performance," Denton said brusquely. "I think we understand each other, Baque. Good morning!"

"You're going to use him on visiscope!" Miss Manning exclaimed. "Jimmy, that's wonderful. May I have him first? I can work him in this morning."

Denton shook his head slowly. "Sorry, darling. We've decided that Mr. Baque's talent is—not quite suitable for visiscope."

"At least I can have him for a guest. You'll be my guest, won't you, Mr. Baque? There's nothing wrong with giving him a guest spot, is there Jimmy?"

Denton chuckled. "No. After all the fuss you stirred up, it might be a good idea for you to guest him. It'll serve you right when he flops."

"He won't flop. He'll be wonderful on visiscope. Will you come in this morning, Mr. Baque?"

"Well . . ." Baque began. Denton nodded emphatically. "We'll be opening a new restaurant soon," Baque went on. "I wouldn't mind being your guest on opening day."

"A new restaurant? That's wonderful! Does anyone know? I'll give it out this morning as an exclusive!"

"It isn't exactly settled, yet," Baque said apologetically. "We haven't found a place . . ."

"Lankey found a place yesterday," Denton said. "He'll be signing a lease this morning. Just let Miss Manning know your opening date, Baque, and she'll arrange a spot for you. Now if you don't mind . . ."

It took Baque half an hour to find his way out of the building, but he plodded aimlessly along the corridors and disdained asking directions. He hummed happily to himself, and now and then he broke into a laugh.

The overlords of the business world—and their scientists—knew nothing about overtones.

"So that's the way it is," Lankey said. "I think we were lucky, Baque. Denton should have made his move when he had a chance—when I wasn't expecting it. When he wises up, I'll see that it's too late."

"What can we do if he really de-

cides to put us out of business?"

"I have some connections myself, Baque. They don't run in high society, like Denton, but they're every bit as dishonest. And Denton has a lot of enemies who'll be glad to back us up. Said he could close me down by evening, eh? It's a funny deal. There's not much we can do that would hurt Denton, but there's plenty we can do to keep him from hurting us."

"I think we're going to hurt Denton," Baque said.

Lankey moved over to the bar, and came back with a tall glass of pink, foaming liquid. "Drink it," he said. "You've had a long day, and you're getting delirious. How could we hurt Denton?"

"Coms. Visiscope depends on Coms. We'll show the people they can have entertainment without them. We'll make our motto *NO COMS AT LANKEY'S!*"

"Great," Lankey drawled. "I just invest a thousand in fancy new costumes for the girls—they can't wear those plastic things in our new place, you know—and you decide not to let them sing."

"Certainly they're going to sing."

Lankey leaned forward, caressing his nose. "And no Coms. Then *what* are they going to sing?"

"I took some lyrics out of an old school book my grandfather had. They're called poems, and I'm writing music for them. I was going to try them out here, but Denton might hear about it, and there's no use starting trouble before it's necessary."

"No. Save them for the new place. And you'll be on *Morning*

with *Marigold* the day we open. Are you certain about this overtones stuff, Baque? You really could be projecting emotions, you know. Not that it will make any difference in the restaurant, but on visiscope . . ."

"I'm certain. How soon can we open?"

"I've got three shifts remodeling the place. We'll seat twelve hundred, and have room for a nice dance floor. Should be ready in two weeks. But I'm not sure this visiscope deal is wise, Baque."

"I want to do it."

Lankey went back to the bar, and got a drink for himself. "All right. You do it. If your stuff comes over, all hell is going to break loose, and I might as well start getting ready for it." He grinned. "Damned if it won't be good for business!"

MARIGOLD MANNING had changed her hair styling to the latest creation of Zann of Hong Kong, and she dallied for ten minutes in deciding which profile she would present to the cameras. Baque waited patiently, a bit uncomfortable in the most expensive dress suit he had ever owned. He was wondering if perhaps he really did project emotions.

"I'll have it this way," Miss Manning said finally, waving a pilot screen in front of her face for a last, searching look. "And you, Mr. Baque? What will we do with you?"

"Just put me at the multichord," Baque said.

"But you can't just play. You'll

have to say something. I've been announcing this every day for a week, and we'll have the biggest audience in years, and you'll just *have* to say something."

"Gladly," Baque said. "If I can talk about *Lankey's*."

"But of course, you silly man. That's why you're here. You talk about *Lankey's*, and I'll talk about Erlin Baque."

"Five minutes," a voice announced crisply.

"Oh, dear," she said. "I'm always so nervous just before."

"Be happy you're not nervous during," Baque said.

"That's so right. Jimmy just makes fun of me, but it takes an artist to understand another artist. Do you get nervous?"

"When I'm playing, I'm much too busy."

"That's just the way it is with me. Once my program starts, I'm much too busy . . ."

"Four minutes . . ."

"Oh, bother!" She seized the pilot screen again. "Maybe I would have been better the other way."

Baque seated himself at the multichord. "You're perfect the way you are."

"Do you really think so? It's a nice thing to say, anyway. I wonder if Jimmy will take the time to watch."

"I'm sure he will."

"Three minutes . . ."

Baque threw on the power, and sounded a chord. Now he *was* nervous. He had no idea what he was going to play. He'd intentionally refrained from preparing something, because it was his improvisations

that affected people so strangely. Only one thing was certain—there would be no Sex Music. Lankey had warned him about that.

He lost himself in thought, failed to hear the final warning, and looked up startled at Miss Manning's cheerful, "Good morning, everyone. It's *Morning with Marigold!*"

Her bright voice wandered on and on. Erlin Baque. His career as a tunesmith. Her amazing discovery of him playing in the *Lankey-Pank Out*. She ran the Tamper Cheese Com. Finally she finished her remarks, and risked the distortion of her lovely profile to glance in his direction. "Ladies and gentlemen, with admiration, with pride, with pleasure, I give you a Marigold Exclusive, Erlin Baque!"

Baque grinned nervously, and coyly tapped out a scale with one finger. "This is my first speech," he said. "Probably it'll be my last. The new restaurant opens tonight. *Lankey's*, on Broadway. Unfortunately I can't invite you to join us, because thanks to Miss Manning's generous comments this past week all space is reserved for the next two months. After that we'll be setting aside a limited number of reservations for visitors from distant places. Jet over and see us!

"You'll find something different at *Lankey's*. There is no visiscope screen. Maybe you've heard about that. We have attractive young ladies to sing for you. I play the multichord. We know you'll enjoy our music. We know you'll enjoy it because you'll hear no Coms at *Lankey's*. Remember that—No

Coms at Lankey's. No soap with your soup. No air cars with your steaks. No shirts with your desserts. No Coms! Just good music played for your enjoyment—like this."

He brought his hands down on the keyboard.

It was a strange experience, playing with no audience, or practically no audience. There was only Miss Manning, and the visiscope engineers, and Baque was suddenly apprehensive that his audiences were responsible for his success. He'd always had a throng of faces to watch, and he had paced his playing according to their reactions. People were listening all over the Western Hemisphere. And later it would be all over Earth, and all over the Solar System. Would they be clapping and stomping? Would they be thinking awesomely, "So that's how music sounds without words, without Coms?" Or would they be listening in mild boredom?

Baque caught a glimpse of Miss Manning's pale face, of the engineers watching with mouths agape, and thought maybe everything was all right. He lost himself in the music, and played fervently.

He continued to play after he knew that something had gone wrong. Miss Manning leaped to her feet and hurried towards him, the engineers were moving about confusedly, and the distant pilot screen was blank. Baque slowed down, and brought his playing to a halt.

"We were cut off," Miss Manning said tearfully. "Who would do such a thing to me? Never, never, in all the time I've been on visiscope—George, who cut us off?"

"Orders."

"Whose orders?"

"My orders!" James Denton strode towards them, and he was not smiling. His lips were tight, his face pale, his eyes gleaming violence and sudden death. "Pretty bright boy, aren't you?" he said to Baque. "I don't know how you worked that trick, but no man fools James Denton more than once. Now you've made yourself a problem, and I'm not going to bother solving it. Consider yourself eliminated."

"Jimmy!" Miss Manning wailed. "My program—cut off. How could you?"

"Shut up, damn it! I'll give you any odds you want, Baque, that Lankey's doesn't open tonight. Not that it's going to make any difference to you."

Baque smiled gently. "I think you've lost, Denton. I think enough music got over to beat you. I'll give you any odds you want that you'll have several thousand complaints by tomorrow. So will the government. And then you'll find out who really runs *Visiscope International*."

"I run *Visiscope International*."

"No, Denton. It belongs to the people. They've let things slide for a long time, and taken anything you'd give them. But if they know what they want, they'll get it. I know I gave them at least three minutes of what they want. That was more than I'd hoped for."

"How did you work that trick in my office?"

"You tricked yourself, Denton—because you didn't know about

overtones. Your intercom wasn't built to carry music. It doesn't carry the upper frequencies at all, so the multichord sounded dead to the men in the other room. But visiscope has the frequency range of live sound."

Denton nodded. "Clever. I'll have the heads of some scientists, for that. And I'll have your head, Baque."

He stalked away, and as the automatic door closed behind him, Marigold Manning clutched Baque's arm. "Quick! Follow me!" As Baque hesitated, she hissed, "Don't stand there like an idiot! He'll have you killed."

She led him through a control room, and out into a small corridor. They raced down it, darted through a reception room past a startled secretary, and out a rear door into another corridor. She jerked him after her into an anti-grav lift, and they shot upwards. At the top of the building she hurried him to the air car landing strip, and left him standing in a doorway.

"When I give you a signal, you walk out," she said. "Don't run, just walk."

She walked out calmly, and Baque heard an attendant's surprised greeting. "Through early this morning, Miss Manning?"

"We're running a lot of Coms," she said. "I want the big Waring."

"Coming right up."

Peering around the corner, Baque saw her step into the flyer. As soon as the attendant's back was turned, she waved frantically. Baque walked carefully towards her, keeping the Waring between the attend-

ant and himself. A moment later they were shooting upwards, and below them a siren sounded faintly.

"We did it!" she gasped. "If you hadn't gotten out before that alarm sounded, you wouldn't have gotten out at all."

Baque took a deep breath, and looked back at the *Visiscope International* Building. "Well, thanks," he said. "But surely that wasn't necessary. This is a civilized planet."

"*Visiscope International* is not civilized!" she snapped.

He looked at her wonderingly. Her face was flushed, her eyes wide with fear, and for the first time Baque saw her as a human being, a woman, a lovely woman. As he looked, she turned away and burst into tears.

"Now Jimmy'll have me killed, too. And where will we go?"

"*Lankey's*," Baque said. "Look—you can see it from here."

She pointed the air car at the freshly painted letters on the strip above the new restaurant, and Baque, looking backwards, saw a crowd forming in the street by *Visiscope International*.

Lankey floated his desk over to the wall, and leaned back comfortably. He wore a trim dress suit, and he had carefully groomed himself for the role of a jovial host, but in his office he was the same ungainly Lankey Baque had first seen leaning over a bar.

"I told you all hell would break loose," he said flatly. "There are five thousand people over by *Visiscope International*, screaming for

Erlin Baque. And the crowd is growing."

"I didn't play for more than three minutes," Baque said. "I thought a lot of people might write in to complain about their cutting me off, but I didn't expect anything like that."

"You didn't, eh? Five thousand people. Probably ten thousand, by now, and nobody knows where it will stop. And Miss Manning, here, risks her neck to get you out of the place—ask her why, Baque."

"Yes," Baque said. "Why go to all that trouble for me?"

She shuddered. "Your music does things to me."

"It sure does," Lankey said. "Baque, you fool, you gave a quarter of Earth's population three minutes of Sex Music!"

LANKEY'S OPENED on schedule that evening, with crowds filling the street outside, and struggling in as long as there was standing room. The shrewd Lankey had instituted an admission charge. The standees bought no food, and Lankey couldn't see the point in furnishing free music, even if people were willing to stand to hear it.

There was one last-minute change. Lankey decided that the customers would prefer a glamorous hostess to a flat-nosed old host, and he hired Marigold Manning. She moved about gracefully, the deep blue of her flowing gown offsetting her golden hair.

When Baque took his place at the multichord, the frenzied ova-

tion lasted for twenty minutes.

Midway through the evening, Baque sought out Lankey. "Has Denton tried anything?"

"Not a thing. Everything is running smoothly."

"It seems odd. He swore we wouldn't open tonight."

Lankey chuckled. "He's had troubles of his own to worry about. The authorities are on his neck about that rioting this afternoon. I was afraid they would blame you, but they didn't. Denton put you on, and then he cut you off, and they figure he's responsible. And according to my last report, *Visiscope International* has had more than ten million complaints. Don't worry, Baque. We'll hear from Denton soon enough—and the guilds, too."

"The guilds? Why the guilds?"

"The Tunersmiths' Guild will be damned furious about your cutting out the Coms. The Lyric Writers' Guild will go along with them, on account of the Coms, and on account of your using music without words. The Performers' Guild won't like you because not many of its members can play worth a damn. By tomorrow morning, Baque, you'll be the most popular man in the Solar System, and the sponsors, and the visiscope people, and the guilds are going to hate your guts. I'm giving you a twenty-four hour bodyguard, and Miss Manning, too. I want you to come out of this alive."

"Do you really think Denton would . . ."

"Denton would."

The next morning the Perform-

ers' Guild blacklisted *Lankey's*, and ordered all the musicians, including Baque, to sever relations. The musicians respectfully declined, and found themselves blacklisted before noon. Lankey called in a lawyer, the most sinister, furtive, disreputable-looking individual Baque had ever seen.

"They're supposed to give us a week's notice," Lankey said, "and another week if we decide to appeal. I'll sue them for five million."

The Commissioner of Public Safety called, and a little later, the Liquor Commissioner. Both conferred briefly with Lankey, and departed grim-faced.

"Denton's moving too late," Lankey said gleefully. "I got to both of them a week ago, and recorded our conversations. They don't dare take any action."

A riot broke out in front of *Lankey's* that night. Lankey had his own riot squad ready for action, and the customers never noticed the disturbance. Lankey's informants estimated that more than fifty million complaints had been received by *Visiscope International*. An anti-Com demonstration erupted spontaneously, and five hundred visiscope screens were smashed in Manhattan restaurants.

Lankey's finished its first week unmolested, entertaining capacity crowds daily. Reservations were pouring in from as far away as Venus and Mars. Baque sent to Berlin for a multichordist to understudy him, and Lankey hoped by the end of the month to have the restaurant open twenty-four hours a day.

At the beginning of the second week, Lankey told Baque, "We've got Denton licked. I've countered every move he's made, and now we're going to make a few moves. You're going on visiscope again. I'm making application today. We're legitimate business, and we've got as much right to buy time as anyone else. If he won't give it to us, I'll sue. He won't dare refuse."

"Where do you get the money for all this?" Baque said.

Lankey grinned. "I saved it up. And I've had a little help from people who don't like Denton."

Denton didn't refuse. Baque did an Earth-wide program direct from *Lankey's*, with Marigold Manning introducing him. He omitted only the Sex Music.

Quitting time at *Lankey's*. Baque was in his dressing room, wearily changing. Lankey had already left for an early-morning conference with his lawyer. They were speculating on Denton's next move.

Baque was uneasy. He was, he told himself, only a dumb musician. He didn't understand legal problems, or the tangled web of connections and influence that Lankey negotiated so easily. He knew James Denton was the incarnation of evil. He also knew that Denton had enough money to buy Lankey a thousand times over. Or pay for the murder of anyone who got in his way. What was he waiting for? With enough time, Baque might deliver a death-blow to the whole institution of Coms. Denton would know that.

So what was he waiting for?

The door burst open, and Mari-gold Manning stumbled in half undressed, her pale face the bleached whiteness of her plastic breast cups. She slammed the door and leaned against it, sobs shaking her body.

"Jimmy," she gasped. "I got a note from Carol—that's his secretary. She was a good friend of mine. She says Jimmy's bribed our guards, and they're going to kill us on the way home this morning. Or let Jimmy's men kill us."

"I'll call Lankey," Baque said. "There's nothing to worry about."

"No! If they suspect anything they won't wait. We won't have a chance."

"Then we'll just wait until Lankey gets back."

"Do you think it's safe to wait? They know we're getting ready to leave."

Baque sat down heavily. It was the sort of move he expected Denton to make. Lankey picked his men carefully, he knew, but then—Denton had enough money to buy any man. And yet . . .

"Maybe it's a trap," he said. "Maybe that note's a fake."

"No. I saw that fat little man Hulsey talking with one of your guards last night, and I knew Jimmy was up to something."

So that was it. Hulsey. "What do you want to do?" Baque said.

"Could we get out the back way?"

"I don't know. We'd have to get past at least one guard."

"Couldn't we try?"

Baque hesitated. She was frightened. She was sick with fright. But she knew far more about this sort

of thing than he did. And she knew James Denton. He'd never have gotten out of *Visiscope International* without her help.

"If you think that's the thing to do, we'll try it."

"I'll have to finish changing."

"Go ahead, then. Let me know when you're ready."

She looked cautiously out the door, and turned back, fear overcoming modesty. "No. You come with me."

Baque and Miss Manning walked leisurely along the corridor at the back of the building, nodded to the two guards that sat there alertly, and with a sudden movement were through the door. Running. A shout of surprise came from behind them, nothing more. They dashed frantically down an alley, turned off, reached another intersection, and hesitated.

"The conveyer is that way," she gasped. "If we can reach the conveyer . . ."

"Let's go!"

They ran on, hand in hand. Far ahead of them the alley opened onto a street. Baque glanced anxiously upwards for air cars, and saw none. Exactly where they were he did not know.

"Are we—being followed?"

"I don't think so. There aren't any air cars, and I didn't see anyone behind us when we stopped."

"Then we got away!"

Thirty feet ahead of them, a man stepped abruptly out of the dawn shadows. As they halted, stricken dumb with panic, he walked towards them. A hat was pulled low over his face, but there was no mis-

taking the smile. James Denton.

"Good morning, beautiful," he said. "*Visiscope International* hasn't been the same without your lovely presence. And a good morning to you, Mr. Baque."

They stood silently, Miss Manning's hand clutching Baque's arm, her nails cutting through his shirt and into his flesh. He did not move.

"I thought you'd fall for that little gag, beautiful. I thought you'd be just frightened enough, by now, to fall for it. I have every exit blocked, but I'm grateful to you for picking this one. Very grateful. I like to settle in person for a double cross."

Suddenly he whirled on Baque, his voice an angry snarl. "Get going, Baque. It isn't your turn, yet. I have other plans for you."

Baque stood rooted to the damp pavement.

"Move, Baque, before I change my mind."

Miss Manning released his arm. Her voice was a choking whisper. "Go!" she said.

"Baque!"

"Go, quickly," she whispered again.

Baque took two hesitant steps.

"Run!" Denton shouted.

Baque ran. Behind him there was the evil crack of a gun, a scream, and silence. Baque faltered, saw Denton looking after him, and ran on.

"So I'm a coward," Baque said.

"No, Baque." Lankey shook his head slowly. "You're a brave man, or you wouldn't have gotten into this. It wouldn't have been bravery,

to try something there. It would have been foolishness. It's my fault, for thinking he'd move first against the restaurant. I owe Denton something for this, Baque, and I'm a man who pays his debts."

A troubled frown creased Lankey's ugly face. He looked oddly at Baque, and scratched his bald head. "She was a brave and beautiful woman, Baque. But I wonder why Denton let you go."

The air of tragedy that hung heavily over *Lankey's* that night did not affect the customers. They gave Baque a thunderous ovation as he moved towards the multichord. As he paused for a half-hearted bow, three policemen closed in on him.

"Erlin Baque?"

"That's right."

"You're under arrest."

Baque grinned. Denton wasn't long in making his next move. "What's the charge?" he said.

"Murder."

The murder of Marigold Manning.

LANKEY PRESSED his mournful face against the bars, and talked unhurriedly. "They have some witnesses," he said, "honest witnesses, who saw you run out of that alley. They have several dishonest witnesses, who saw you fire the shot. One of them is your friend Hulsey, who just happened to be taking an early-morning stroll along that alley—or so he'll testify. Denton would probably spend a million to convict you, but he won't have to. He won't even have to bribe the

jury. The case against you is that good."

"What about the gun," Baque said.

"They found it. No fingerprints, of course. But someone will claim you were wearing gloves, or someone will have seen you wipe it off."

Baque nodded. Things were out of his hands, now. He'd worked for a cause that no one understood—perhaps he didn't understand himself what he was trying to do. And he'd lost.

"What happens next?"

Lankey shook his head. "I'm not one to hold back bad news. It means life. They're going to send you to the Ganymede rock pits for life."

"I see," Baque said. He added anxiously, "You're going to carry on?"

"Just what were you trying to do, Baque? You weren't only working for *Lankey's*. I couldn't figure it out, but I went along with you because I like you. And I like your music. What was it?"

"I don't know." A concert? A thousand people gathered together to hear music? Was that what he wanted? "Music, I suppose," he said. "Get rid of the Coms—or some of them."

"Yes. Yes, I think I understand. *Lankey's* will carry on, Baque, as long as I have any breath left. That new multichord player isn't bad. He's nothing like you were, but then—there'll never be another one like you were. We're still turning people away. Several other restaurants are doing away with visiscope and trying to imitate us, but we

have a big head start. We'll carry on the way you had things set up, and your one-third still stands. I'll have it put in trust for you. You'll be a wealthy man when you get back."

"When I get back!"

"Well—a life sentence doesn't necessarily mean life. See that you behave yourself."

"Val?"

"She'll be taken care of. I'll give her a job of some kind, to keep her occupied."

"Maybe I can send you music for the restaurant," Baque said. "I should have plenty of time."

"I'm afraid not. It's music they want to keep you away from. So—no writing of music. And they won't let you near a multichord. They think you could hypnotize the guards, and turn all the prisoners loose."

"Would they—let me have my record collection?"

"I'm afraid not."

"I see. Well, if that's the way it is . . ."

"It is. Now I owe Denton two debts."

The unemotional Lankey had tears in his eyes as he turned away.

The jury deliberated for eight minutes, and brought in a verdict of guilty. Baque was sentenced to life imprisonment. There was some editorial grumbling on visiscope, because life in the Ganymede rock pits was frequently a very short life.

And there was a swelling undertone of whispering among the little people that the verdict was bought and paid for by the sponsors, by visiscope. Erlin Baque was framed,

it was said, because he gave the people music.

And on the day Baque left for Ganymede, announcement was made of a public exhibition, by H. Vail, multichordist, and B. Johnson, violinist. Admission one dollar.

Lankey collected evidence with painstaking care, rebribed one of the bribed witnesses, and petitioned for a new trial. The petition was denied, and the long years limped past.

The New York Symphony Orchestra was organized, with twenty members. One of James Denton's plush air cars crashed, and he was instantly killed. An unfortunate accident. A millionaire who once heard Erlin Baque play on visiscope endowed a dozen conservatories of music. They were to be called the Baque Conservatories, but a musical historian who had never heard of Baque got the name changed to Bach.

Lankey died, and a son-in-law carried on his efforts as a family trust. A subscription was launched to build a new hall for the New York Symphony, which now numbered forty members. Interest spread like an avalanche, and a site was finally picked in Ohio, to be within easier commuting distance of all parts of the North American continent. Beethoven Hall was erected, to seat forty thousand people. The first series of concerts was fully subscribed forty-eight hours after tickets went on sale.

Opera was given on visiscope for the first time in two hundred years.

An opera house was built on the Ohio site, and then an art institute. The Center grew, first by private subscription, and then under government sponsorship. Lankey's son-in-law died, and a nephew took over the management of *Lankey's*—and the campaign to free Erlin Baque. Thirty years passed, and then forty.

And forty-nine years, seven months and nineteen days after Baque received his life sentence, he was paroled. He still owned a third interest in Manhattan's most prosperous restaurant, and the profits that had piled up over the years made him a wealthy man. He was ninety-six years old.

Another capacity crowd at Beethoven Hall. Vacationists from all parts of the Solar System, music lovers who commuted for the concerts, old people who had retired to the Center, forty-thousand of them, stirred restlessly and searched the wings for the conductor. Applause thundered down from the twelve balconies as he strode forward.

Erlin Baque sat in his permanent seat at the rear of the main floor. He adjusted his binoculars and peered at the orchestra, wondering

again what a contrabassoon sounded like. His bitterness he had left behind on Ganymede. His life at the Center was an unending revelation of miracles.

Of course no one remembered Erling Baque, tunesmith and murderer. Whole generations of people could not even remember the Coms. And yet Baque felt that he had accomplished all this, just as surely as if he had built this building—built the Center—with his own hands. He spread his hands before him, hands deformed by the years in the rock pits, fingers and tips of fingers crushed off, his body maimed by cascading rocks. He had no regrets. He had done his work well.

Two ushers stood in the aisle behind him. One jerked a thumb in his direction, and whispered, "Now there's a character for you. Comes to every concert. Never misses one. And he just sits there in the back row watching people. They say he was one of the old tunesmiths, years and years ago."

"Maybe he likes music," the other said.

"Naw. Those old tunesmiths never knew anything about music. Besides—he's deaf." **END**

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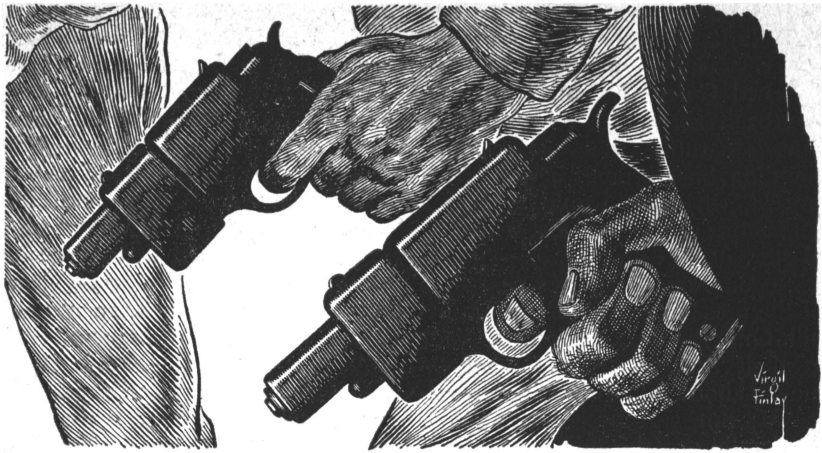
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THE LAST

He had only two aims in life: first, to get what he wanted; and after that to enjoy it. But to achieve the one he'd have to give up the other . . . or would he?

BY TOM GODWIN



Illustrated by Virgil Finlay

VICTORY

The transport ship, bound for Capella with Outlander colonists from Earth and Frontier Guards from Arcturus, struck the hyperspace vortex without warning. It seized her, wrenching and twisting her, and flung her across its gigantic rim at thousands of times the speed of light. She emerged into normal space in an unknown region of the galaxy, broken and driveless, but near enough a planet that she could descend by means of her antigravity plates before the last of her air was gone.

It was sunset when she settled heavily to earth on a grassy slope beside a forest, leaning at a dangerous angle with only her failing antigravity plates to hold her from falling. The dead had been disposed of in space and the living filed out of her: fifty Outlander men, women and children, eighteen ship's crewmen, and ten Frontier Guards.

The Guard officer and ship's captain came last, of equal rank and already appraising each other with cold speculation.

THE HOWLING things in the dark forest were coming closer. Thane listened as he watched Curry, the ship's captain, approach across the strip of land that separated the two camps; standing back from his fire as he waited, where he would make an uncertain target for an assassin's blaster.

No one could be seen near any of the fires in the two camps on the hill. Only the unarmed Outlanders, at their fires in the swale below, moved about without wariness. And it was not yet three hours from the landing of the ship.

Curry stopped before him, restrained anger on his arrogantly handsome face.

"You failed to report to me and turn your Frontier Guards over to my command as you were ordered," he said.

"Since your rank is no higher than mine I saw no reason to do so," Thane answered.

Curry smiled, very thinly. "Perhaps I can show you a reason."

"Perhaps. Let's have it."

"First, I want to remind you of our circumstances," Curry said. "The ship will never lift again and we're marooned here for centuries to come. You know what the reaction of the Outlanders will be."

The Outlanders were the outcasts of a society that could not tolerate individuality. Two hundred years before the complexities of civilization had combined technocracy with integration and produced Technogration. Technogration had abolished race, creed and color, nations and borders, had welded all

into a common mass and prohibited all individual pursuits that did not contribute to the Common Good. The Outlanders, refusing to come under Technograte domination, lived as best they could in the deserts, plateaus and jungles that Technogration could not use. The ones on the ship had been bound for Capella Five where men accustomed to wrestling a living from hostile environments were needed. Under such circumstances Outlanders were given certain rights and freedoms. Until they were no longer needed. Then, again, they became a people without a world . . .

"For two hundred years the Outlanders have hated Technogration and wanted a world where they could set up their own archaic form of society," Curry said. "Now, those down there will think their millenium has arrived and they can refuse to recognize Technograte authority."

"I see," Thane said. "And you want my cooperation so that Technogration won't fall by the wayside?"

"Your willingness to accept a subordinate position would give me an intact force of both crewmen and Guardsmen." Curry's lips thinned. "But there will be Technogration, with or without your support. There will be no retrogression back into the Outlanders' hallowed Dark Ages."

"There is no argument—we both want Technogration," Thane said. "We only disagree over who should be in command."

"There is a slight difference in

our qualifications. Your present rank was gained by your ability to kill and not by loyalty to Techno-gration."

"Yes, of course," Thane agreed. "We'll say that I'm a materialistic opportunist while you're a noble idealist. But it's still the same identical whip that we're both going to reach for."

"As I said, I would prefer a peaceful transfer of your Guardsmen to my command. But my crewmen outnumber them almost two to one and they are expendable if necessary." The thin smile came back, almost mocking in its confidence. "You haven't much choice but to cooperate and accept a subordinate role, have you?"

The subordinate role would be very brief; it would end with a blaster beam in the back as soon as the Guardsmen were transferred to Curry's command . . .

"Try again, Curry. I can't bite on that one."

The smile faded from Curry's face, leaving it icily cold. "That was the only opportunity you'll ever get."

The howling sounded again in the forest and Thane said:

"We understand each other, now. But the Outlanders are unarmed and it may require our full forces to hold off whatever is out there. I suggest a truce until morning."

The iciness remained on Curry's face and he did not reply at once. "Perhaps you are right. You will order your men to observe a truce for the rest of the night."

He turned back to his camp.

Thane made the rounds where his guards patrolled with their searchlights probing out into the darkness. All of Curry's men but two had been added to reinforce the guard ring around the Outlander camp; most of the crewmen along the east and south lines, leaving the more experienced Guardsmen to patrol the two lines facing the forest.

Guardsmen and crewmen patrolled in silence, watching one another with the calculating regard of men who knew they might soon be ordered to kill one another. Apparently it was obvious to all of them that two officers of equal rank was a situation that could not for long exist.

His return to his camp took him through the scattered camp fires of the Outlanders. There were not many men to be seen; most of the survivors were women and children whom the Outlander leader had ordered into the safer inner compartments when the ship began breaking up.

Thane met him at the second fire; a gaunt old man with a jutting gray beard and sharp blue eyes under bristling gray brows. He stepped out from the fire and spoke:

"Captain Thane—I'd like to ask a question."

Thane stopped. "What is it?"

"My name is Paul Kennedy and I speak for all of us," the old man said. "Captain Curry has locked up all arms from us—he's already starting the regimentation for a permanent Technograte colony here and making sure we

can't object. For two hundred years Technogration has failed on Earth except to turn men into robots. Here we could have a new chance and live like humans again."

"The question," Thane reminded him.

"You were in the Frontier Guards, where men still have to think for themselves to survive, and we were hoping you would understand why we don't want to start another ant hill here."

He could understand—but now, after thirty years of planning and fighting, he was only one step from the top.

"There will be Technogration," he said.

"We thought you would say that." Kennedy's expression did not change. "We hoped we would be wrong."

An ecstatic yelping sounded suddenly from nearby and something brown and white raced across the firelit ground with a laughing boy in pursuit. Thane stared.

It was a dog.

He had not seen one for thirty years. Technogration prohibited the owning of pets as an unnecessary drain upon the planned economy and as non-contributive to the Common Good.

"We knew about the regulations," Kennedy said, "but children need pets to love and be loved by. She's going to have pups—only she and Lornie's kitten were left." The old man's eyes watched him closely, questioningly. "Surely, no one will object to them?"

The dog circled back and a dark

haired young woman beyond another fire called to it: "Binkie—come here!"

The dog obeyed, its tail drooping a little, and the woman looked uncertainly in Thane's direction before she disappeared back in the shadows, the dog close behind her. The boy followed, asking, "Why did you stop us, Blanche?"

Thane watched them go, the sight of the boy and dog bringing back with unwanted vividness the memory of another Outlander boy who had played with his dog, long ago; bringing back the past that necessity had forced him to forget . . .

He put the dangerous weakness from his mind and spoke to Kennedy:

"You Outlanders were bound for a Technograte world when you left Earth. You now stand on a Technograte world. You will do as you are ordered to do. As for your pets—you may have as many as you want so far as I'm concerned."

He stepped past Kennedy and continued on through the camp. The conversation of the Outlanders froze as he drew near, letting him walk in a little sea of silence that moved along with him. It was the usual reaction to the presence of a Technograte officer.

A little girl was out beyond the last fire; her back turned to him as she knelt in the grass and worked at something. He came closer and saw she was trying to tie a white cord around the neck of a half grown kitten. It sat with resigned patience as she struggled with ear-

nest, inexperienced fingers to tie a knot that would not fall apart. She was talking to it as she worked:

“—and maybe the things in the forest kill cats. So you’ll have to stay tied up, Tommy, and close to me because you’re the only kitten on this whole world—”

His shadow fell across her and she looked up. Black curls framed a startled little face and gray eyes went wide at the sight of his uniform. She seized the surprised kitten and held it protectively in her arms, the knot falling apart again on the ground.

“Please—Tommy won’t ever hurt anything—”

Two women and a man were watching him from beyond the fire with frozen-faced hatred. Techno-grate regulations required the immediate killing of any animals found smuggled aboard a ship...

“I won’t harm your kitten,” he said. He smiled sardonically at the Outlanders beyond the fire. “My horns aren’t quite that long yet.”

HE MET Curry when he was almost back to his camp. Curry had two bodyguards with him and passed without speaking.

The hours went by and the night was like a cold October night on Earth but for the strange constellations that crept across the sky. The Outlander fires burned lower and the things in the forest became silent, as though massing for a surprise attack. Twice the wind shifted, to bring the scents from the forest, and each time he heard

the dog growl uneasily while the woman tried to quiet her.

He was going down the south guard line, the western horizon touched with the light of coming moonrise, when the monsters attacked the north line.

They broke suddenly from the forest with a demoniac howl of command from their leader, a boiling wave of them. They were green, hard to see against the green grass, racing low to the ground like giant tigers, their long, serpentine necks thrust forward and eyes blazing yellow in hyena faces.

The blaster fire of the Guardsmen met them, pale blue beams that blossomed into brief incandescence when they struck. Curry’s guards added their fire, their reactions slower than those of the Guardsmen. The guards along the other three lines turned to help halt the attack, the south line guards firing across the Outlander camp.

The front rank of monsters went down, with them the leader. For an instant the onslaught slowed, leaderless and uncertain, then the monster that had been behind the leader gave the commanding howl and the others surged ahead again.

At that moment, when the attention of every guard in every guard line was on the north perimeter attack, the Outlander dog broke loose from whoever had been holding her. She ignored the attack from the north and was a blur as she went through the south guard line, screaming a snarl of warning and her leash whipping in the air behind her. She vanished behind

the guard line and Thane swung his searchlight.

Five monsters were almost upon the backs of the unsuspecting guards, charging without sound.

His blaster beam raked at them and two went down. The others struck three guards with their bodies, knocking them to the ground before they could fire. Then the monsters passed on, to lurch a dozen steps and fall limply to the ground. They did not even twitch after they fell.

He saw, when he reached the first one, that it was dead. So were the other two.

Yet there was not a blaster mark on them.

Then he saw another thing. One of the monsters had fallen with its jaws slackly open and its teeth were visible. They were blunt and even.

Despite their ferocious appearance, the monsters were only herbivores.

The three fallen guards were getting to their feet, apparently unharmed. Along the north perimeter the attack was over as suddenly as it had begun; the leader of the monsters lying dead against the guard line and all the others still alive fleeing wildly back into the forest. Quiet came, broken only by the growling of the dog out near the two monsters Thane had killed.

He turned his light on her, then went closer to make sure he had seen rightly.

She was fighting something on the ground, green-eyed with fury as she ripped and tore at it. But

there was nothing there. Nothing. "Binkie!"

The dark haired woman was coming toward them, wraithlike in a white sleeping garment. The dog turned away, with a last rip at the nothing it fought, and saw the three guards the monsters had knocked down. She froze, like as though she saw something she could not believe.

Then, deadly with menace, a growl vibrated in her throat and she crouched to attack them.

"Binkie—*don't!*" The voice of the girl was shrill with urgency. "Come here—come here!"

The dog hesitated, then obeyed; going past the guards in a swift lope, her head turned to watch them and her teeth bared in a snarl. The girl seized the leash and girl and dog disappeared back into the Outlander camp, both of them running.

Curry loomed out of the darkness, his two bodyguards with him, and flashed his light over the fallen monsters.

"So you let three get through?" he said. He glanced to the north guard line where the searchlights of the guards showed only the dark, lifeless edge of the forest. "But no one was harmed and there's no indication that they are going to attack again."

He regarded Thane with cold thoughtfulness. "Apparently the camp is in no danger, after all."

To Thane the implication of his words was obvious: if the monsters were not a menace his cooperation was no longer needed by Curry. The three guards were Curry

men and Curry had two with him. He was outnumbered six to one . . .

"Sir—"

It was one of the three guards; Bellam, the ship's pharmacist. He hurried up to Curry, the other two close behind him.

Curry swung on him, impatiently. "What is it?"

"We must combine our forces to fight a new danger. This camp is infected with rabies."

"Rabies?"

"Yes, sir," Bellam answered. "The Outlander's dog had a convulsion beyond the guard line and then almost attacked the three of us. That dog is mad."

"How do you know it was a convulsion?" Thane asked.

"You saw it, yourself," Bellam answered.

He turned his head to face Thane as he spoke and Thane saw his eyes for the first time.

They were the lifeless, staring eyes of a dead man.

He flicked his light over the faces of the other two guards. They were the same; all three were like walking dead.

"Did the monsters harm you?" he asked Bellam.

Bellam hesitated, seeming to tense with suspicion. "No." The dead eyes stared into his. "What makes you ask?"

He saw that Curry had noticed nothing different about the three guards. It was typical of Curry; to him subordinates were only automatons to carry out his orders.

"We were discussing a mad dog, Thane," Curry said. "Not the health of my men." He spoke to

Bellam. "As I recall, rabies was a pre-Technogration plague, often fatal."

"The bite of a rabid animal is invariably fatal, the death prolonged and painful," Bellam said. "There is no preventative or cure among the medical supplies on the ship. The dog must be killed at once, together with all other animals in the Outlander camp."

"If the dog was mad, why hasn't it bitten any of the Outlanders," Thane asked Curry. "I suggest we keep it on a leash until we know for sure."

"The dog was smuggled aboard the ship in defiance of regulations," Curry said. "It would have been destroyed before had I known about it."

He turned to Bellam, ignoring Thane. "The three of you will search the Outlander camp from end to end. Kill all animals and report to me the names of the owners."

The three departed, to begin the search at the nearer end of the camp. Thane made no further objection. He knew the Outlanders well enough to know that they would have overheard the discussion on the hill and slipped the dog out through the guard lines before that discussion ended. Outlanders could be very clever in such matters—the searchers would find no dog.

There was satisfaction on Curry's face as he turned and with his two bodyguards started back up the hill to his camp. Thane watched him go, smiling a little. Curry was making the mistake that had been

fatal for so many before him; he was taking it for granted too soon that he had won.

A man came hurrying from the north guard line before Curry had gone far. He called to Curry:

"Sir, there is something you ought to know—"

Thane saw, with almost disbelief, that it was one of his own men: Gorman.

Curry waited and when Gorman reached him he said:

"When I was helping inspect the Outlander section of the ship for hidden weapons this evening I saw some small animals in storage compartment Thirteen. I think they were very young kittens. I would like to volunteer to go and kill them."

Curry said something that a vagrant breeze made inaudible then his words came clear:

"—I'll send a detail to the ship as soon as the camp is searched. You will report to my guards now for orders and help them hunt for the dog."

Gorman started back to meet the guards and Curry stood for a little while before he went on his way. Thane could imagine his feeling of pleased surprise and triumph.

Thane called to Gorman as he passed some distance in front of him.

"Were you injured in the attack?" he asked.

"No," Gorman said. Then, with the same tense suspicion that Bellam had had he asked the same question: "Why do you ask?"

"Why did you report to Curry instead of me?"

The answer came quickly, mechanically, "The animals are in his ship and they must be killed. They may be mad."

"Go help Curry's men," he said and watched Gorman go, trying to fit together the incidents that did not make sense.

Herbivores had attacked without reason. There had fallen dead, without a blaster mark on them. The Outlander dog had fought nothing and almost attacked the guards. One of his own men had gone over to the other side. And there was a sudden strange urgency to kill all animals in camp.

There was nothing he could do for the time being but wait for further developments so he waited. The moon came up, so swift in its retrograde orbit that its speed was visible and so near that it had the brilliance of a dozen Earth moons. When it had lifted clear of the horizon it flooded the land with a cold silver light that made the searchlights of the guards unnecessary and revealed the camp with metallic light-and-shadow clarity.

The search party was halfway through the camp, Gorman with them and Bellam in command. They were ransacking the possessions and temporary shelters of the Outlanders with swift efficiency, ignoring the protests of the women and their blasters leveled warningly on the men.

They found the little girl.

She was carrying her kitten ahead of them, a small, silent shadow in the moonlight, when Gorman saw her. He spoke to Bellam and Bellam's head jerked up.

Then the two of them advanced on her.

She tried to run when she realized they had seen the kitten, hugging it in her arms with the white cord trailing behind her. Bellam overtook her and caught her by the shoulder, jerking her to a halt. He tore the kitten from her arms and flung it hard to the ground. It made a thin little scream of pain and the girl fought to reach it, her cry sobbing and frantic:

"Don't hurt him—"

Gorman's blaster hissed and blue flame leaped from it. Incandescence enveloped the kitten and then there was nothing where it had been but a small black hole in the ground.

Bellam and Gorman wheeled back, like mechanical men, to resume the search. The girl stood a moment, staring before her, saying something very low that sounded like, *"Tommy . . . Tommy . . ."* Then she stumbled to the little black hole and dropped to her knees beside it as though she hoped that somehow she might still find her kitten there.

He looked away, strangely disturbed. He drummed his fingers restlessly on the butt of his holstered blaster then he turned again to go down into the Outlander camp.

The moon was up and it was time he found the dog. Something had come out of the night with the monsters and perhaps she could tell him what it was. He could not yet believe she was mad.

The dark haired woman stood by the fire, watching the little girl

and the searchers with bitter, smouldering hatred. She faced him, her breath coming fast in her anger.

"Her parents and her brother—when the ship broke up—she lost them all. Only her kitten was left to her."

"Where is the dog?" he asked.

"Find her!"

"The dog—where is she?"

"Find her," she challenged again.

"Find her and kill her—if you can!"

He stepped past her and went on his way. She had told him what he wanted to know: despite her attempts not to do so she had been unable to keep from glancing toward the ship.

HIS ROUTE took him by the little girl. She was standing by the hole, small and bare-footed in the grass, her hands holding the white cord that was black and charred on one end. She was crying, silently, as though too proud to let him see her break.

After he had passed her the vision went with him for a little way; the terrible, helpless hatred and hurt in her eyes and the moonlight gleaming coldly on her tears.

He looked back when he reached the ship. Gorman was coming, running, and the other three were turning back from the far end of the camp to hurry after Gorman.

He looked toward Curry's camp and saw Curry watching him. Curry and his men moved toward him and there were six to make a rendezvous with him.

The truce was over.

He found the dog behind the farthest tail fin, leashed to a thorny bush and almost invisible in the shadows.

She watched him as he stopped before her, her ears forward questioningly and her tail moving a little with tentative friendliness. He spoke to her and her reply was a low bark, her tail whipping with delight. She thought he had come to release her . . .

He had known dogs well as a boy and he knew the one before him was not mad.

He heard Gorman's feet plodding fast through the grass and he waited with his blaster in his hand.

Gorman came around the tail fin, panting, his own blaster in his hand. The dog went rigid at the sight of him, the growl in her throat, and Gorman's blaster swung toward her.

"Hold it!" he ordered.

Gorman paused, and the dead eyes looked into his. "There the mad dog is—we must kill it."

"We can kill it later if it's mad. We'll watch it a while, first."

The suspicion became like something almost tangible about Gorman and his blaster started the first movement toward Thane.

"Why?"

"I think it can see something—"

Gorman fired, so swiftly that he felt the heat of the beam even though he had been expecting it. He shot for the heart and Gorman collapsed before he could fire again. He lay still on the ground, the eyes that stared up into the

sky no deader than when he had been alive.

The dog was lunging against her leash, trying to get to him. Thane stepped closer and watched the grass beside Gorman's head. A patch of it the size of his hand suddenly bent down, as from an unseen weight, and then something struck his knee.

He slapped at it as it darted up his leg and knocked it off; something that felt like a mass of cold, rubbery tentacles. He knew, then.

He stepped back, his blaster swinging aimlessly. The thing would leap again, to reach his head as it had done with Gorman, and it was invisible. There was nothing but the moonlit grass to be seen. Perhaps it was behind him, already preparing to spring . . .

The dog's snarling was a frenzied scream as she fought against her leash. He swung his blaster and its blue beam cut the leash in two.

She flashed toward him, then up, her ears laid back, her eyes blazing slits and her teeth slashing at his throat. His blaster was in line with her chest and for a brief instant he had only to press the firing stud.

He did something he had not done for thirty years; he trusted his life to another being and did not fire.

Cold tentacles whipped against his face and her teeth closed together beside his cheek with a vicious snap and gust of hot breath. She rebounded and held the thing on the ground between her paws as she tore at it; gagging a little, whining and snarling in fury and triumph.

He squatted beside her and laid his hand on her, speaking to her soothingly. She calmed a little, though her chest still pounded with the beating of her heart, and he saw the thing she had killed.

It was dead and slowly becoming visible as it changed to a color like pale milk. It resembled a huge, hairless spider.

It was a parasite; a highly intelligent parasite that could take over the mind of its host as well as the body. The parasites had had only the forest monsters as hosts, before, but with the coming of the humans they had the opportunity for hosts of a far higher order. They possessed a means of locomotion but apparently it was limited in its duration or else they would not have needed to control the leaders of the monster bands and stage the attack that would carry them to the guard lines.

The dog, with the acute sixth sense of some animals, could sense the hostile alienness of the things. She could see them—apparently the vision range of dogs went a little farther beyond that of humans. So also would that of cats but the kitten had had no chance to show by its actions what it had seen.

The dog had hated the changed men because they were alien things, no longer human. The thing that had been Bellam had used the knowledge stored in Bellam's mind to claim there was rabies in the camp and thereby enlist the support of the humans in killing their only means of detecting the parasites.

There was a pounding of feet be-

yond the ship as the zombies came. On the slope above him Curry was striding toward him, his bodyguards flanking him and the moonlight bright on his face.

He stood with the dog beside him and watched them come to kill him. Only he and the dog knew of the parasites; if they were killed the way would be open for the parasites to infiltrate the camp. In the end the new world would hold only the walking dead, down to the last Outlander child.

"Curry," he called.

He did not have to speak loudly in the still night air for Curry to hear him but Curry came on, his face hard, arrogant metal in the moonlight.

"Give me one minute, Curry, to tell you what I found."

Curry's reply was the order to his men.

"The dog is with him. Kill them both."

His blaster swung up as he spoke.

Thane dropped, firing as he went down. Curry's arrogant face dissolved into nothing and his blaster flamed aimlessly into the ground at his feet. The blaster of the swiftest guard sent its beam hissing like a snake over Thane's head, then he went down as Curry had done, the other guard falling beside him with his first and only shot licking off into the moonlight.

Then the zombies came around the tail fin, in a quick rush with their dead eyes staring and their blasters making a curtain of blue fire before them.

The dog lunged at them and a blaster beam dipped down to meet

her. Bellam—his headless body was falling forward as Thane killed the zombie beside him. The blaster of the third one ripped its beam like a white-hot iron along Thane's ribs as he died. Then, within two heartbeats, it was over and the night was quiet again.

He returned his blaster to its holster. The dog was limping from one zombie to the other, searching for parasites, her shoulder red with blood and staining the grass.

She found none and he called her to him to look at her shoulder. It was not a serious wound but it was painful and bleeding fast and should be cared for. He took her around the ship, where the Outlander camp lay in view below. He looked again at the wound and she whimpered a little from the pain, gentle though his touch had been, then licked his hand in quick apology.

"Your job is over for now," he said. He motioned toward the camp below, where the dark haired woman was waiting. "Home, girl—go home."

She left him and went running and limping down the hill where her hurts would be cared for.

His side was burning and blood was like a warm, wet sheet down it. He made a temporary bandage of his shirt and then leaned wearily against the tail fin.

It was all over. The nature of the parasites was known and everyone could be fitted with a thin metal helmet until they were completely eliminated. They did not seem to be numerous—apparently there had

been no more than ten or twelve among the scores of monsters. The dog would watch, and warn them if any more were in the vicinity.

It was all over, with Curry a motionless spot on the hillside above him and no one left to challenge him. He had come a long way from the Outlander boy on the high, cold prairie who had hated Technogration. He had been nineteen before he finally realized the futility of hating the unassailable power of Technogration and realized he must accept it and adapt to it. And then carve out a niche for himself with a ruthlessness greater than any of those around him. So he had fought his way up, trampling those who would have trampled him had they been a little stronger, each step another victory in his conquest of the system that had condemned him.

And now—the last victory. There was no one to challenge him; there could be no one under the rigid discipline of Technogration.

The last victory. The security of Power to the end of his life.

That was Technogration.

DAWN TOUCHED the sky, softening the moon's hard light. As though the coming of day was a signal, the ship trembled and there was the whisper of dislodged soil as the tail fin lifted a fraction of an inch. The antigravity plates were almost exhausted—the ship would fall within minutes.

Down in the Outlander camp the children were gathering around the dog as the dark haired woman bandaged her shoulder. A voice

came to him, treble and joyous, "Binkie is back—Binkie is back . . ."

The little girl sat to one side, so small and alone that he almost failed to see her. She watched the children crowd up to pet their dog but she did not move to join them. Only her hands moved, caressing the white cord that was charred on one end.

He felt the triumph and satisfaction become like something turned bitter around the edges and draining away.

Technogration was planning and fighting and killing until at last a man reached the top and no one dared oppose him; Technogration was control of a world and the seeds of an empire.

And Technogration was a child crying in the cold moonlight, was a little black hole where a kitten had screamed out with pain, with a little girl's heart that had nothing left to hold but harsh and poignant memories and a piece of burnt cord.

He ran to the boarding ramp, feeling the fiery lash of pain and hot flow of blood as the wound reopened, telling himself he was a fool who would probably die in the falling ship and would deserve it.

He stood by the gray ashes of his fire, the Guardsman's combat helmet under his arm, and watched the little girl come alone up the hill. Someone had washed the tear-stains from her face and she stopped before him with her head held high and defiant, trying not to let him see she was afraid of him and almost succeeding.

"I sent for you, Lornie, to tell

you I'm sorry about last night."

He saw she did not believe him. Her face was like a little carving of cold, unforgiving stone and she did not answer him.

He set the helmet down in the grass before her. Six tiny kittens lay inside it, red and white and gray fluffs of fur, their pink mouths questing hungrily.

Her eyes widened with incredulous wonder.

"Oh!"

Then the suspicion came back and she stopped the quick forward step she had taken.

"They haven't any mother and they're hungry," he said.

She did not move.

"They're yours, Lornie. To keep."

"They're—mine?" Then the doubt fled from her and she ran forward to gather them in her arms.

He left her with her head bent down over the kittens in her lap, making soft little sounds of endearment to them, her face so radiant that there was no room left for hurt or hatred on it.

Kennedy was coming, not yet knowing why he had been summoned nor that Technogration had died at dawn. He would not relinquish all his authority, of course. And he would have to remember to tell Kennedy that they were going to give him one of Binkie's pups.

The companionship of an understanding dog might be comforting in the years to come, whenever he recalled the morning he had owned a world and a bare-footed girl had taken it away from him. **END**

What Is Your Science I. Q.?

HERE'S a regular hodge-podge of everything. Let's see how you fare. Score 5 points for each correct answer; 70 is good, 80 very good, 90 and you're a genius. Answers are on page 57.

1. A diatom is a form of _____.
2. The rate of the diffusion of gases _____ with the temperature.
3. What form of reproduction was characteristic of dinosaurs?
4. One dyne acting through a distance of one centimeter is called an _____.
5. The ratio of the number of solar eclipses to lunar eclipses is about _____.
6. Does zinc or brass undergo a greater expansion in a one degree rise of temperature?
7. Charles' Law states that the _____ of a gas is directly proportional to its absolute temperature.
8. Any object whose shadow is used to determine time is called a _____.
9. Which of the following terms or concepts does not apply to lichens?—fungus, perennial, seeds, symbiosis.
10. Hyperon is a term used to refer to which of the following?—subatomic particles, hormones, unit of measurement.
11. What is the correct chemical name for marsh gas?
12. What body gland secretes ACTH?
13. What is the color of seaweeds found at the greatest ocean depths?
14. Ozone is _____ times heavier than oxygen.
15. The pupa is the _____ stage in the life of an insect which undergoes complete metamorphosis.
16. What is the correct chemical name for saltpeter?
17. The four elements, oxygen, hydrogen, carbon and nitrogen make up _____ per cent of protoplasm.
18. Mach one is equal to how many miles per hour?
19. What is the term used to describe the common center of gravity of two revolving masses such as Earth and the moon?
20. Electromagnetic waves of any wave length travel at a rate which is roughly equal to _____.

*This article, by an authority on the subject, reveals the folly
of a recent proposal made by the United States
to the United Nations. Read it carefully—
and with concern for the future.*

WHY GUIDED MISSILES CAN NOT BE CONTROLLED

BY "Y"

ON JANUARY 12th, 1957 the United Nations General Assembly released a four-page memorandum which had been presented to its Eleventh Session. The document bore the code number of A/C.1/783, and was marked Agenda Item 22 of the Eleventh Session, First Committee. On those four pages were contained proposals which called for "the prohibition of atomic, hydrogen, and other weapons of mass destruction . . ."

Submitted to the General Assembly by the United States of America, this memorandum achieved distinction through its reference to weapons other than atomic and thermonuclear bombs. For the first time the United Nations was brought face to face with the question of intercontinental ballistic missiles and military satellites which were to orbit about the earth in extraterrestrial space. The specific wording of that proposal is vital to

every American citizen. If it is adopted and an attempt is made to carry it out, it may well be the invitation to future sudden disaster of a magnitude difficult to conceive. Here, verbatim, is the weapons-control proposal now under study by the United Nations:

“Scientists in many nations are now proceeding with efforts to propel objects through outer space and to travel in the distant areas beyond the earth’s atmospheric envelope. The scope of these programmes is variously indicated in the terms: ‘earth satellites’, ‘intercontinental missiles’, ‘long-range unmanned weapons’, and ‘space platforms’. No one can now predict with certainty what will develop from man’s excursion in this new field. But it is clear that if this advance into the unknown is to be a blessing rather than a curse the efforts of all nations in this field need to be brought within the purview of a reliable armaments control system. The United States proposes that the first step toward the objective of assuring that future developments in outer space would be devoted exclusively to peaceful and scientific purposes would be to *bring the testing of such objects under international inspection and participation.*”

The sentiments expressed in this proposal are highly appealing. At first glance they appear to contain the seeds of an international inspection program which would guarantee us a freedom from sudden intercontinental missile attack. In one

full swoop, it seems, we have discovered the panacea to rid us of the recurring nightmare of an unexpected and a devastating ballistic missile bombardment.

It’s a pretty sentiment, but it won’t work. It has a fallacious premise which might well escape the attention of the diplomat, but which is obvious immediately to the missile engineer. For the substance of the disarmament proposal—and the crux of its practicality—is that there exists a real and distinct difference between a military missile and a scientific missile.

This is not at all true. Fundamentally, the rocket which carries 1,000 pounds of instruments at a speed of 8,000 miles per hour to 500 miles above the earth is the same as the rocket moving in a ballistic trajectory which carries a 1,000-pound atomic bomb at a speed of 8,000 miles per hour to a target 2,000 or 3,000 miles away.

In the interest of scientific research, the rocket carries instruments along a vertical trajectory.

In the interests of transforming a large city into a hideous radioactive wasteland, the instruments are replaced with a bomb, and the rocket tilts from a vertical climb into a ballistic arc.

This is the first, but not at all the only glaring weakness in a proposal based upon “international inspection”. I need not call upon future developments to prove this point; the familiar rockets of the past and of the present will suffice.

The most obvious example, of course, is the German V-2 rocket. This was, from the start, a military

program which had as its ultimate goal a rocket to carry a ton of high explosives into cities 200 miles distant. While this weapon degenerated into an appalling military failure, it represented sheer technological genius.

With the war over and done with, the same military V-2 rocket had its warhead replaced with instruments, and was used as a vehicle to further the cause of science.

Now, let us turn the tables and consider a rocket designed from the outset as a research vehicle—the familiar Viking. With only 37% of the power generated by the V-2's motor, the slender Navy research rocket has carried nearly a thousand pounds of instruments 158 miles into space, reaching a maximum velocity of 4,300 miles per hour. Note that this speed is fully 700 miles per hour greater than that achieved by the V-2, although the power available is far less than found in the former German military weapon.

The Viking is a highly sophisticated vehicle. Its delicate control system which utilizes a three-axis gyroscope, a magnetic amplifier autopilot (robot brain), and a gimbaled motor, endows it with phenomenal control during its flight. It is stabilized in pitch and yaw movements, and its tendency to roll can be fully controlled. Most important, its attitude in flight can be controlled *after* the rocket motor has ceased to fire. This is indispensable to any ballistic rocket of high accuracy for it means that the entire rocket (after fuel is exhausted), or a separated warhead, may be di-

rected accurately to a target. Control of the rocket, or warhead, is maintained during the descent from the peak of the trajectory above the atmosphere, and to a much finer degree as the rocket or warhead plunges through the thickening air toward its objective.

Compared to the Viking, then, the V-2 was a crude Chinese fire arrow. The Viking has constant, *full-time* control. Once the V-2's motor ceased firing it was an uncontrollable empty shell tumbling haphazardly above the atmosphere.

By replacing the instruments with an atomic bomb, the Viking rocket could be fired with devastating accuracy into targets up to 300 miles distant.

But—isn't it a research vehicle? A rocket dedicated to peaceful pursuits?

Of course it is! It is also a highly effective military weapon, if we choose to use it as such.

A parallel to the Viking may be found in the Army's latest tactical weapon, the Redstone, developed by Dr. Wernher von Braun and his staff—the same people who developed the V-2. It is most interesting to note that, like the Viking, the 70-foot Redstone is controllable in movements of pitch, yaw, and roll. Even more pertinent is the fact that the warhead separates from the rocket shortly after the end of powered flight and that, through the use of small jet reactors which bleed off compressed air (exactly as in Viking) the warhead may be directed to a target with impressive accuracy.

You can replace the Viking's in-

struments with an atomic bomb warhead.

You can replace the Redstone's atomic bomb warhead with instruments. Both will perform the same mission—military or scientific.

Let us discuss some other examples. The Project Vanguard satellite rocket has barely eleven tons total weight, and is a highly-sophisticated vehicle which carries an instrument payload of some 22 pounds. With this payload, Vanguard will reach velocities in excess of 18,000 miles per hour. This is far greater—almost twice as much—as that needed for a ballistic missile of intercontinental range.

Note, however, that Vanguard is a minimum satellite effort. We could reduce its speed to 14,000 miles per hour, and increase the payload (eliminating its role as a satellite, of course), or, we could eliminate the third stage altogether, and replace the weight of the third-stage solid-propellant rocket and the instrumented satellite with an atomic bomb equal to 250,000 tons high explosive force. And Vanguard enjoys a high degree of in-flight control.

Yet, Vanguard is a purely scientific venture. It is also an intercontinental missile carrying a minimal atomic bomb.

There can be no distinction between the two—military and scientific—in respect to rockets. The only difference a missile enjoys is determined by the man who decides what its payload shall be—bomb or instruments.

THE NAVY'S secret PROJECT ORBITER—which in 1954 called for a small satellite to be shot into an orbit at a speed between 17,000 and 18,000 miles per hour, was a pure research effort, to be conducted by the Office of Naval Research. The first-stage booster rocket was the giant Redstone, a military weapon. The second stage was a cluster of Loki rockets—another military weapon. The third stage was a single Loki rocket—a military weapon.

What was the distinction? Absolutely none—only the choice of payload distinguished the destroyer of a city from the scientific prober of outer space.

The gist of the United States proposal to the United Nations is that a system of close inspection of the manufacture, testing, and firing of these large rockets, and of satellites which will lift hundreds and even thousands of pounds into orbits about the earth, will prevent the use of such rockets as weapons, by an intimate knowledge of their number, payload, and firing locations.

Let us examine the first premise—the manufacture and the number available of these rockets. It is obvious that in nations so large and diverse as the United States and the Soviet Union, large factories and even a complex of factories may be hidden from the eye of the public or, for that matter, from international inspection groups. No better example of this is provided than in the monumental effort of the Manhattan Project during World War II.

Further, a factory to produce rocket motors and shells is not the immense undertaking which characterized the development and manufacture of the first crude atomic weapons. Motors may be produced in small plants, rocket shells and fuel tanks by any automotive or marine industry, instruments by any one of thousands of factories. The static testing of these devices may be accomplished far from civilized centers in the strictest secrecy. Indeed, an entire rocket industry may be spread throughout the industrial nation which is the United States, and never be revealed.

The same applies, of course, to the Soviet Union.

But even this subterfuge is totally unnecessary! For the research rocket to lift 500 pounds into an orbit is an intercontinental ballistic missile! The rocket to carry 2,000 pounds to a height of 800 miles is an intermediate range ballistic missile!

The problem of payload substitution is no barrier. No inspection team can possibly keep track of every large rocket, or even of the thousands of rockets scattered around the land. It's simply too easy to keep the rockets from the sight of even an inspection team.

What about launching sites? The long-range missiles may be fired from virtually *anywhere*. Mountains, deserts, open fields, deep forests, ships at sea, submarines—any location will do. The United States is incredibly large; many parts of our country to this day have never been explored. The trackless ex-

pense of Canada can swallow vast missile facilities—“research rockets,” if you will.

In essence, then, any inspection program can be reduced to uselessness by any nation which chooses not to reveal its intentions to employ large rockets for military purposes.

The latest advances in solid-propellant rockets only makes more critical the problem of discovering a well-planned move to blanket an enemy country within the span of a few hours with hydrogen bomb-carrying missiles. Any massive attack which uses the liquid-propellant rocket suffers a logistical problem of sorts in supplying the vast quantities of unstable fuel to fire those rockets. Of course, the production of these elements can be (and has been) established at remote locations, but it still presents a major inconvenience to a firing program.

What of solid-propellant rockets—great canisters of plastics and chemicals? Obviously these sources of power in their latest form more than suffice to meet the needs of intermediate and intercontinental range bombardment. The Navy's latest missile weapon, the *Polaris*, is nothing more than an oversized booster rocket using a solid-propellant fuel! And *Polaris* has a range greater than 1,500 miles—which can be increased at any time simply by increasing the size of the chemical/plastic firing charge.

The power and versatility of the new solid-propellant charges are incredible. They represent a major break-through in missile technology. The giant Redstone is pow-

ered with a 75,000 lb. thrust liquid-propellant motor which burns for 90 seconds. Today, however, there are solid-propellant charges which generate 1,000,000 lbs. thrust—more than the combined power of 13 Redstone rockets!

Moreover, the new solid-propellant charges are insensitive to temperatures; they may be fired in extreme heat or in extreme cold. They can generate their fantastic thrust for as great a duration as 300 seconds—compare this to the Redstone's firing time of 90 seconds!

They can be stored for long periods of time. They can be fired from the simplest of launchers, anywhere. They can be disguised with the greatest of ease. Their simplicity of manufacture, shipment, and storage; their ease of firing; their newly-acquired high degree of controllability; and their enormous performance and high payloads—render an inspection program virtually worthless.

No number of inspection teams, with all their probing and prying, could uncover a well-concealed and determined plan to fire hundreds, or even thousands, of these missiles. They could destroy a nation overnight.

(Another factor, which is ignored, involves the human being. How extensive a prying search would our people voluntarily submit themselves to? How long would they suffer the indignity of representatives from, let us say, Russia, Pakistan, Poland, New Zealand, Argentina, probing into their affairs? For such inspection to be reliable, thousands of men would

have to swarm about the nation looking into every conceivable facet of our industrial and personal lives! I know I wouldn't like it!)

The fallacies of the inspection program are evident. Imagine, then, the precarious—the *fatal*—position in which our nation would be placed, were we to rely for our very existence upon the effectiveness of such an inspection scheme. Mutual arms inspection in this day and age, with the new heights of missile and weapons science already reached, is a premise which bodes only disaster.

It contains not the slightest assurance of safety. Would you base the lives of your family and friends upon an assurance that our inspection teams had been able to search every nook and cranny of the vast land of the U.S.S.R., its satellites, the Siberian wastes, the Polar regions? How could any of us place ourselves in so untenable a position!

Such inspection affords us no protection from the placement by saboteurs of atomic bombs in all our critical cities and industries. Nuclear weapons are small gadgets nowadays; they will fit into an overnight bag, into a typewriter case, into a bowling ball container. Sealed tight by the lightest of metal shields, they no longer emit penetrating radiation which can be detected by radiological instruments. They can be placed anywhere—and only a screwdriver to pry open the carrying container, which can be disguised in any imaginable form, will divulge the nature of the contents.

In preparing this report for *IF* magazine, I discussed this matter with several of my engineering colleagues. We deal in rockets. We know them intimately. There is no situation which we would rather see than an effective program in being to protect us, and the entire world, from the threat of mass attack with rockets carrying atomic and hydrogen bombs.

But we must, above all, be realistic. If we are to rest our security upon the fallacious premise that an inspection and control program for rockets is effective, then we do no more than to openly court national suicide. This is bitter, inescapable truth. You cannot hide from the facts. Scientific rockets are intercontinental weapons. Long steel containers, disguised in a hundred ways, are intercontinental weapons.

It is impossible to guarantee freedom from world violence through inspection teams prying into each other's national cupboards, by the same token that it is simple to use—upon short notice—the tools of science for the tools of war.

I personally have no magic pan-

acea for this dilemma which confronts us. I do not know the answer to world peace, and freedom from the appalling spectre of a savage hydrogen bomb war. But I do know that the hopes for peace which rest upon the inspection of facilities in each other's lands is suicidal.

In closing, I am reminded to leave you with the words I heard at the dedication of the Mount Palomar Observatory. These words ring with truth; they should never be forgotten:

"There is no segment of knowledge, whether in the physical or the social sciences, whether in medicine or economics or astrophysics or anthropology, which cannot ultimately be employed to the deterrent of mankind if that is what we deliberately elect to do with it.

"Indeed, if the social sciences were developed as the physical sciences have been, we might have a weapon which, in unscrupulous hands, would be as deadly as the atomic bomb."

. . . . and how do you control and inspect that? **END**

WHAT IS YOUR SCIENCE I.Q.?

ANSWERS: 1—Algae. 2—Increases. 3—Egg laying. 4—Erg. 5—4 to 3. 6—Zinc. 7—Volume. 8—Gnomes. 9—Seeds. 10—Subatomic particles. 11—Methane. 12—Pituitary. 13—Red. 14—1½. 15—Third. 16—Potassium nitrate. 17—99. 18—761. 19—Barycenter. 20—The speed of light.

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Virgil
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What good were a doctor's years of schooling and study and tradition in a world that was willing to trust men's lives to the devil's tinkertoys?

Wanted in Surgery

A MAN named Alexi Andrei—who had escaped from the People's Polish Protectorate to the North American Continent's sanctuary, late in the year 2087—invented it. While working as a bonded scientist for the Orrin Tool Corporation—on a design to create a robot capable of fine watch repairs—he discovered the factor of multiple choice. He was able to apply this factor, to the celluloid-plasteel brain of his watch repair robot's pilot model, and came up with the startling physician mechanical. Far more intricate than a mere robot-mechanical, yet far simpler than a human brain, it was capable—after proper con-

BY HARLAN ELLISON

ditioning—of the most delicate of operations. Further, the “phymech”, as it was tagged soon after, was capable of infallible diagnosis, involving anything organic.

The mind was still locked to the powers of the metal physician, but for the ills of the body there was no more capable administrator.

Andrei died several weeks after his pilot model had been demonstrated at a special closed session of the House of Congress; from a coronary thrombosis. But his death was more of a propelling factor to widespread recognition of the phymech than his life could ever have been.

The House of Congress appointed a committee of fact-finders, from the firm of Data, Unlimited—who had successfully completed the Orinoco Basin Probe—and compared their three month findings with the current Medicine appropriations allocated to the Secretary of Medicine.

They found phymechs could be operated in all the socialized hospitals of the Continent, for far less than was being spent on Doctor’s salaries.

After all, a Doctor continued to *need*.

A phymech absorbed one half pint of liquified radiol every three years, and an occasional oiling, to insure proper functioning.

So the government passed a law. The Hippocratic Law of of 2088, which said, in essence:

“All ministrations shall henceforth be confined to government-sponsored hospitals; emergency cases necessitating attendance out-

side said institutions shall be handled *only*, repeat *only*, by registered Physician Mechanicals issuing from registered hospital pools. Any irregularities or deviations from this procedure shall be handled as cases outside the law, and illegal attendance by non-Mechanical Physicians shall be severely punishable by cancellation of practicing license and/or fine and imprisonment . . .”

Johns Hopkins was the first to be de-franchised. Then the Columbia School of Medicine, and the other colleges followed quickly.

A few specialist schools were maintained for a time, but it became increasingly apparent after the first three years of phymech operation, that even the specialists were slow compared to the robot doctors. Doctors who had been licensed before the innovations the phymechs brought, were maintained at slashed salaries, and reduced to assistants, internes.

They were, however, given a few privileges, which boiled down eventually to a franking privilege so postage was unnecessary on their letters, a small annual dole, subscriptions to current medical journals (now filled more with electronic data pertinent to phymechs than surgical techniques) and honorary titles. Doctors in title only.

There was dissatisfaction.

In 2091 Kohlbenschlagg, the greatest brain surgeon of them all, died. He passed away on a quiet October morning, with the climate dome purring ever so faintly above the city, and the distant scream of

the transport sphincter opening to allow the Earth-Mars 8:00 liner through. A quiet, drawn-faced man with a great talent in slim fingers. He died in his sleep, and the papers clacked out of the homeslots, with heavy black headlines across yellow plastic sheets. But not about Kohlenschlagg. *He* was yesterday's news. The headline was about the total automation changeover in the Ford-Chrysler plants.

On page one hundred and eighteen there was a five line obituary that labeled him "a pre-phymech surgeon of some skill". It also reported he had died of acute alcoholism.

It was not specifically true.

His death was caused by a composite. Acute alcoholism.

And a broken heart.

He died alone, but he was remembered. By the men who, like him, had spent their early lives in dedication to the staff and the lion's head, the hand and eagle's eye. By the men who could not adjust. The small legion of men who still walked the antiseptic corridors of the hospitals.

Men like Stuart Bergman, M.D.

This is his story.

THE MAIN operating room of Memorial was constructed along standard lines. The observation bubble was set high on one wall, curving large and down, with a separating section allowing two viewing stands. The operating stage, on a telescoping base that raised or lowered it for easier observation from the bubble, squatted hugely

in the center of the room. There were no operating lamps in the ceiling, as in old-style hospitals, for the phymechs each had their own powerful "internal" light mounted atop their heads, that served more accurately than any outside light could have.

Other than the stage, there were anaesthetic spheres clipped to the walls—in five-container groups—where they could be easily reached should the phymech's personal supply run dry, and a rapidroll belt running from a digital supply machine beside the operating table to the selector cabinets, clear-fronted, that waited by the exits.

That was all; that was everything needed.

Even the spheres and extra cabinets might have been dispensed with, but somehow, they had been maintained, just slightly limiting the phymech's abilities. As though to reassure some unnamed person that they needed help. Even if it was mechanical help to help the mechanicals.

The three phymechs were performing the operation below the bubble, when Bergman came in. The bubble was dark, but he could see Murray Thomas's craggy features set against the light of the operating stage. The illumination had been a concession to the human observers, for with their own internal lights, the phymechs could work in total blackout.

Bergman held the crumpled news sheet in his hand, page one hundred and eighteen showing, and stared at the tableau below him.

Naturally, it *would* be a brain

operation today! The one day it should be a mere goiter job, or a plantar stripping. If just to keep him steady; but no, it *had* to be a brain job, with the phymechs' thirty telescoping, snakelike appendages extruded, and snicking into the patient.

Bergman swallowed hard, and made his way down the slope of aisle to the empty seat beside Thomas.

He was a dark man, with an almost unnaturally spadelike face. High, prominent cheekbones, giving him a gaunt look, and veins that stood out along the temples. His nose was thin, and humped where it had been broken years before.

His eyes were deep and so blue they appeared black. His hair was thinly, roughly combed; back from the forehead without affectation or wave, just combed, because he had to keep the hair from his eyes.

He slumped into the seat, keeping his eyes off the operation below, keeping the face of Murray Thomas in his sight, with the light from below playing up across the round, unflustered features. He held out the news sheet, touching Thomas's arm with it. The young doctor turned slowly, and his placid stare met the wild look of Bergman.

Bergman offered the sheet again, and Thomas took it. He opened it out, turning it below the level of the seats, trying to catch the light from below. He roamed the page for a moment, then his hands crumpled tight on the plastic. He saw the five line filler.

Kohlenschlagg was dead.

He turned to Bergman, and his eyes held infinite sorrow. He mouthed with his lips the words, "I'm sorry, Stuart," but they died midway between them.

He stared at Bergman's face for a moment, knowing he could do nothing for the man now. Kohlenschlagg had been Stuart Bergman's teacher, his friend, more a father to him than the father Bergman had run away from in his youth. Now Bergman was totally alone . . . for his wife Thelma was no help in this situation . . . her constitution could not cope with a case of inner disintegration.

With difficulty he turned back to the operation, feeling an overwhelming desire to take Bergman's hand, to help ease away the sorrow he knew coursed through the man; but the sorrow was a personal thing, and he was cut off from the tense-faced man beside him.

Bergman watched the operation now. For there was nothing else to do. He had spent ten years of his life training to be a physician, and now he was sitting watching faceless blocks of metal do those ten years better than he ever could.

Murray Thomas was abruptly aware of heavy breathing beside him. He did not turn his head. He had seen Bergman getting nearer and nearer the cracking stage for weeks now; ever since the phymechs had been completely installed, and the human doctors had been relegated to assistants, internes, instrument-carriers. He feverishly hoped this was not the moment Bergman would choose to snap all the way.

The phymechs below were proceeding with the delicate operation. One of the telescoping, snakelike tentacles of one phymech had a wafer-thin circular saw on it, and as Thomas watched, the saw sliced down, and they could hear the buzz of steel meeting skull.

"God in *heaven!* Stop it, stop it, stop it . . .!"

Thomas was an instant too late. Bergman was up out of his seat, down the aisle, and banging his fists against the clear plasteel of the observation bubble, before he could be stopped.

It produced a feeling of utter hysteria in the bubble, as though all of them had wanted to scream, had been holding it back, and now were struggling with the sounds, not to join in. Bergman battered himself up against the clearness of the bubble, mumbling, screaming, his face a riot of pain and horror.

"Not even a . . . a . . . decent *death!*" he was screaming. "He lies down there, and rotten dirty metal *things* . . . things, God dammit! *Things* rip up his patients! Oh, God, where is the way, where, where, where . . ."

Then the three internes erupted from the door at the top rear of the bubble, and ran down the aisle. In an instant they had Bergman by the shoulders, the arms, the neck, and were dragging him back up the aisle.

Calkins, the Head Resident, yelled after them, "Take him to my office for observation, "I'll be right there."

Murray Thomas watched his friend disappear in the darkness

toward the rectangle of light in the rear wall. Then he was gone, and Thomas heard Calkins say: "Ignore that outburst, Doctors, there is always someone who gets squeamish at the sight of a well-performed operation."

Murray Thomas felt a brassy, bitter taste on his tongue; Bergman afraid of blood, the sight of an operation? Not likely. The operating room was home to Bergman. No, it hadn't been that.

Then it was that Thomas realized that the incident had completely shattered the mood and attention of the men in the bubble. *They* were incapable of watching the phymechs any further today—but the phymechs . . .

. . . they were undisturbed, unseeing, uncaring; calmly, coolly working, taking off the top of the patient's skull.

Thomas felt desperately ill.

"HONEST TO God, I tell you, Murray, I can't take it much longer!"

Bergman was still shaking from the examination in Calkins's offices. His hands trembled ever so slightly across the formatop of the table. The dim sounds of the Medical Center bar filtered to them in the hush-booth. Bergman ran a hand through his hair. "Every time I see one of those . . ." he paused, hesitated, then did not use the word. Murray Thomas knew the word, had it come forth, would have been *monster*. Bergman went on, a blank space in his sentence, "Every time I see one of them picking around

inside one of my patients, with those metal tips, I—I get sick to my stomach! It's all I can do to keep from ripping out its goddamned wiring!" His face was deathly pale, yet somehow unnaturally flushed.

Dr. Murray Thomas put out a hand placatingly. "Now take it easy, Stu. You keep getting yourself all hot over this thing and if it doesn't break you—which it damned well easily could—they'll revoke your license, bar you from practicing." He looked across at Bergman, and blinked assuringly, as if to keynote his warning.

Bergman muttered with surliness, "Fine lot of practicing I do now. Or you, for that matter."

Thomas tapped a finger on the table. It caused the multi-colored bits of plastic beneath the formatop to jiggle, casting pinpoint lights across Bergman's strained features. "And besides, Stu, you have no *logical*, scientific reason for hating the phymechs."

Bergman stared back angrily. "Science doesn't come into it, and you know it. This is from the gut, Murray, not the brain!"

"Look, Stu, they're infallible; they're safer and they can do a job quicker with less mess than even a—a Kohlbenschlagg. Right?"

Bergman nodded reluctantly, but there was a dangerous edge to his expression. "But at least Kohlbenschlagg, even with those thick-lensed glasses, was *human*. It wasn't like having a piece of—of—well, a piece of *stovepipe* rummaging around in a patient's brain."

He shook his head sadly in re-

membrance. "Old Fritz couldn't take it. That's what killed him. Those damned machines. Playing interne to a phymech was too much for him. Oh hell! *You* know what a grand heart that old man had, Murray. Fifty years in medicine and then to be barely *allowed* to hold sponge for a lousy tick-tock . . . and what was worse, knowing the tick-tock could hold the sponge more firmly with one of its pincers. That's what killed Old Fritz."

Bergman added softly, staring at his shaking hands, "And at that . . . *he's* the lucky one."

And then: "We're the damned of our culture, Murray; the kept men of medicine."

Thomas looked up startled, then annoyed, "Oh, for Christ's sake, Stuart, stop being melodramatic. Nothing of the sort. If a better scalpel comes along, do you refuse to discard the old make because you've used it so long? Don't be an ass."

"*But we're not scalpels. We're men! We're DOCTORS!*" He was on his feet suddenly, as though the conversation had been physically building in him, forcing an explosion. The two whiskey glasses on the table slipped and dumped over as his thighs banged the table in rising. Bergman's voice was raised, and his temples throbbed, yet he was not screaming; even so, the words came out louder than any scream.

"For God's sake, Stu, *sit down!* If the Head Resident should walk in, we'd *both* get our throats cut."

Bergman slumped slowly back

onto the form seat. It depressed and flowed around him caressingly, and he squirmed in agony, as though it were strangling him. Even after he was fully seated, his shoulders continued rounding; his eyes were wild. Beads of perspiration stood out on his forehead, his upper lip.

Thomas leaned forward, a frown creasing his mouth. "Take hold, Stu. Don't let a thing like this ruin you. Better men than us have felt this way about it, but you can't stop progress. And losing your head, doing something crazy like that exhibition at the operation yesterday, won't do any of us any good. It's all we can do to maintain what rights we have left. It's a bad break for us, Stu, but it's good for the whole rest of the human race, and dammit man, they come before us. It's as simple as that."

He drew a handkerchief from his breast-pouch and mopped at the spreading twin pools of liquor, covertly watching Bergman from behind lowered lashes.

The sudden blare of a juke brought Bergman's head up, his nostrils flaring. When he realized what it was, he subsided, the lights vanishing from his eyes.

He rested his head in his hand, rubbing slowly up and down the length of his nose. "How did it all start, Murray? I mean, all this?" He looked at the roaring juke that nearly drowned out conversation despite the hush-booth . . . the bar with its mechanical drink-interpolator—remarkable mnemonic circuits capable of mixing ten thousand different liquors flawlessly—

and intoxication-estimator . . . the fully-mechanized hospital rearing huge outside the glassteel-fronted bar . . . robot physicians glimpsed occasionally passing before a lighted window.

Windows showing light only because the human patients and fallible doctors needed it. The robots needed no light; they needed no fame, and no desire to help mankind. All they needed was their power-pack and an occasional oiling. In return for which they saved mankind.

Bergman's mind tossed the bitter irony about like a dog with a foul rag in its mouth.

Murray Thomas sighed softly, considered Bergman's question. He shook his head. "I don't know, Stu." The words paced themselves, emerging slowly, reluctantly. "Perhaps it was the automatic pilot, or the tactical computers they used in the Third War, or maybe even farther back than that; maybe it was as far back as electric sewing machines, and hydramatic shift cars and self-serve elevators. It was machines, and they worked better than humans. That was it pure and simple. A hunk of metal is nine times out of ten better than a fallible man."

Thomas considered what he had said, added definitely, "I'll take that back: *ten* times out of ten. There's nothing a cybernetics man can't build into one of those things now. It was inevitable they'd get around to taking human lives out of the hands of mere men." He looked embarrassed for an instant at the length and tone of his reply,

then sighed again and downed the last traces of his drink, running his tongue absently around the lip of the glass, tasting the dried liquid there.

Bergman's intensity seemed to pulse, grow stronger. He was obviously trying to find an answer to the problem of himself, within himself. He hunched further over, looking into his friend's face earnestly, almost boyishly, "But—but it doesn't seem *right*, somehow. We've always depended on doctors—human doctors—to care for the sick and dying. It was a constant, Murray. A something you could depend on. In time of war, a doctor was inviolate.

"In times of need—I know it sounds maudlin, Murray—for God's sake, in times of need a doctor was priest and father and teacher and patriot, and . . . and confessor and . . ."

He made futile motions with his hands, as though pleading the words to appear from the air. Then he continued in a stronger voice, from a memory ground into his mind:

"I will keep pure and holy both my life and my art. In whatsoever houses I enter, I will enter to help the sick, and I will abstain from all intentional wrongdoing and harm. And whatsoever I shall see or hear in the course of my profession in my intercourse with men, if it be what should not be published abroad, I will never divulge, holding such things to be holy secrets."

Thomas's eyebrows rose slightly as his lips quirked in an unconscious smile. He had known Berg-

man would resort to the Oath eventually. Dedicated wasn't enough of a word to describe Stuart Bergman, it seemed. He was right, it *was* maudlin, and still . . .

Bergman continued, "What good is it all now? They've only had the phymechs a few years now, only a few, and they have them in solid . . . even though they're things about them they aren't sure about. So what good were all the years in school, in study, in tradition? We can't even go into the homes any more."

His face seemed to grow more haggard under the indirect gleam of the neon lights in the Lounge; his hair seemed greyer than a moment before; the lines of his face were deeper. He swallowed nervously, ran a finger through the faint coating of wet left by the spilled drinks. "What kind of a practice is that? To carry slop-buckets? To be allowed to watch as the robots cut and sew our patients? To be kept behind glass at the big operations?

"To see the red lights flash on the hot board and know a mobilized monster is rolling faster than an ambulance to the scene? Is that what you're telling me I have to adjust to? Are you, Murray? Don't expect me to be as calm about it as you!

"And most degrading of all," he added, as if to solidify his arguments, "to have them throw us a miserable appendectomy or stomach-pump job once a week. Like scraps from the table . . . and watch us while we do it! I tell you

I'm going crazy, Murray! I go home at night and find myself even cutting my steak as though it were heart tissue. Anything, anything at all, just to remind myself that I was trained for surgery. Murray, where's it going to end?"

He was on the verge of another scene like the one in the operating room observation bubble.

Whatever had happened when the Head Resident had examined Bergman—and it *seemed* to have been cleared up, for Bergman was still scheduled on the boards as phymech Assistant, though his weekly operation had been set ahead three days—it wouldn't do to let it flare up again.

And Murray Thomas knew things were boiling inside his ex-schoolmate; he had no idea how long it would be before the lid blew off, ruining Bergman permanently.

"Calm down, Stuart," he soothed. "Let me dial you another drink . . ."

"*Don't touch that goddam mechanical thing!*" he roared, striking Thomas's hand from the interpolater dial.

Raggedly he gasped, "There are *some* things a machine *can't* do. Machines brush my teeth in the morning, and they cook my food, and they lull me to sleep, but there must be *something* they can't do better than a human . . . otherwise why did God create humans? To be waited on by tin cans? I don't know what they are, but I swear there must be some abilities a human possesses that a robot doesn't. There must be something

that makes a man more valuable than a whirring, clanking chunk of tin!" He stopped, out of breath. It was then that Calkins, the Head Resident, stepped around the panel separating the booths from the bar.

The Head Resident stood there silently, watching for a moment, like a dog on point. He fingered the lapel of his sport-jumper top absently. "Getting a bit noisy, aren't you, Dr. Bergman?" he inquired.

Stuart Bergman's face was alive with fear. His eyes lowered to his hands; entwined like serpents, seeking sanctuary in each other, white with the pressure of his clasping, his fingers writhed. "I—I was just, just, airing a few views . . . that's all, Dr. Calkins."

"Rather nasty views, I must say, Dr. Bergman. Might be construed as dissatisfaction with the way I'm handling things at Memorial. You wouldn't want anyone to think that, would you, Dr. Bergman?" His words had taken on the tone of command, of steel imbedded in rock.

Bergman shook his head quickly, slightly, nervously. "No. No, I didn't mean that at all, Dr. Calkins. I was just—well, you know. I thought perhaps if we physicians had a few more operations, a few more difficult . . ."

"Don't you think the phymechs are quite capable of handling any such, Dr. Bergman?"

There was an air of expectancy in his voice . . . waiting for Bergman to say the wrong thing. *That's what you'd like, wouldn't you, Calkins? That's what you want!*

His thoughts spun sidewise, madly.

"I suppose so . . . yes, I know they are. It was, well, it's difficult to remember I'm a Doctor, not doing any work for so long and all and . . ."

"That's about enough, Bergman!" snapped Calkins. "The government subsidized the phymechs, and they use taxpayer's money to keep them serviced and saving lives. They have a finer record than *any* human . . ."

Bergman inserted sharply, "But they haven't been fully tested or . . ."

Calkins stared him into silence, replied, "If you want to remain on the payroll, remain in the hospital, Dr. Bergman, even as an Assistant, you'd better tone down and watch yourself. We have our eyes on you."

"But I . . ."

"I said that's enough, Bergman!" Turning to Murray Thomas he added violently, "And I'd watch who I keep company with, Thomas, if I were you. That's all. Good evening." He strode off lightly, almost jauntily, arrogance in each step, leaving Bergman huddled in a corner of the booth, staring wild-eyed at his hands.

"Rotten lousy appointee!" snarled Thomas softly. "If it weren't for his connections with the Secretary of Medicine he'd be in the same boat with us. The lousy bastard."

"I—I guess I'd better be getting home," mumbled Bergman, sliding out of the booth. A sudden blast from the juke shivered him, and he regained his focus on Thomas

with difficulty. "Thelma's probably waiting dinner for me.

"Thanks . . . thanks for having a drink with me, Murray. I'll see you at washup tomorrow." He ran a finger down the front of his jumper, sealing the suit; he pulled up his collar, sealing the suit to the neck.

A fine spray of rain—scheduled for this time by Weatherex—was dotting the huge transparent front of the Lounge, and Bergman stared at it engrossedly for an instant, as though seeing something deeper in the rain.

He drew a handful of octagonal plastic coins from his pouch, dropped them into the pay slot on his side of the table, and started away. The machine registered an overpayment, but he did not bother to collect the surplus coins.

He paused, turned for a moment. Then, "Thanks . . . Murray . . ." and he was gone into the rain.

THAT NIGHT was hell. Hell with the torture of memories past and present. He knew he had been acting like a fool, that he was just another stupid man who could not accept what was to be.

But there was more, and it pervaded his thoughts, his dreams. He had been a coward in front of Calkins. He had run away from his problem.

Now, all the years he had lived by the Oath were wasted. His life seemed to be a failure. He had struggled desperately to get where he was, and now that he was there . . . he was nowhere.

He was helpless in the spider's mesh of a situation in which he could not move to do what he knew was right. He did not know *why* he was so set against the phymechs—Murray's analogy of the scalpel was perfectly valid—but something sensed but unnamed in his guts told him he was right. This was unnatural, damnable, that humans were worked over by machines.

It s o m e h o w—irrationally—seemed a plan of the Devil. He had heard people call the machines the Devil's Playthings. Perhaps they were right. He lay on his bed, sweating.

Feeling incomplete, feeling filthy, feeling contaminated by his own inadequacy, and his cowardice before Calkins.

He screwed his face up in agony, in self-castigation, shutting his eyes tight, tight, till the nerves running through his temples throbbed.

Then he placed the blame where it really belonged.

Why was he suffering? Why was his once-full life so suddenly empty and framed by worthlessness? Fear. Fear of what? Why was he afraid? Because the phymechs had taken over.

Again. The same answer. And in his mind, his purpose resolved, solidified.

He had to get the phymechs discredited; had to find some reason for them to be thrown out. But how? How?

They *were* better. In all ways. Weren't they?

Three days later, as he assisted a phymech on his scheduled Operat-

ing Assignment, the answer came to Bergman as horribly as he might have wished. It came in the form of a practical demonstration, and he was never to forget it.

The patient had been involved in a thresher accident on one of the group-farms. The sucker-mouth thresher had whipped him off his feet, and dragged him in, feet first. He had saved himself from being completely chewed to bits by placing his hands around the mouth of the thresher, and others had rushed in to drag him free before his grip loosened.

He had fainted from pain, and luckily, for the sucker-mouth had ground off both his legs just below the knees. Whey they wheeled him before Bergman—with his oxygen-mask and tube in hand—and the phymech—with instruments already clasped in nine of its thirteen magnetic tips—the man was covered with a sheet.

Bergman's transparent face-mask quivered as he drew back the sheet, exposing the man. They had bound up the stumps, and cauter-halted the bleeding . . . but the patient was as badly off as Bergman had ever seen an injured man.

It will be close all the way. Thank God, in this case, the phymech is fast and efficient. No human could save this one in time.

So intent was he on watching the phymech's technique, so engrossed was he at the snicker and gleam of the instruments being whipped from their cubicles in the phymech's storage-bin chest, he failed to adjust the anaesthesia-cone properly. Bergman watched

the intricate play of the phymech's tentacles, as they telescoped out and back from the small holes in each shoulder-globe. He watched the tortured flesh being stripped back to allow free play for the sutures. The faint hiss of the imperfectly-fitted cone reached him too late.

The patient sat up, suddenly.

Straight up, with hands rigid to the table. His eyes opened, and he stared down at the ripped and bloodied stumps where his legs had been.

His scream echoed back from the high operating room walls.

"No! Oh God no! No . . ."

Over and over his hysterical screams beat at Bergman's consciousness. The phymech automatically moved to stop off the rising panic in the patient, but it was too late. The patient fainted, and almost instantly the cardio showed a dip. The spark was going out.

The phymech ignored it; there was nothing he could do about it. Organically the man was being handled efficiently. The trouble was mental . . . where the phymech never went.

Bergman stared in horror. The man was dying . . . right out from under the tentacles. *Why doesn't the thing try to help the man? Why doesn't he soothe him, let him know it'll be all right? He's dying, because he's in shock . . . he doesn't want to live! Just a word would do . . .*

Bergman's thoughts whipped themselves into a frenzy, but the phymech continued operating, calmly, hurriedly, but with the patient failing rapidly.

Bergman started forward, intent on reaching the patient. The injured man had looked up and seen himself amputated bloodily just beneath the knees, and worse, had seen the faceless metal entity working over him; at that crucial moment when any little thing could sway the desire to live, the man had seen no human with whom he could identify . . . merely a rounded and planed block of metal. He wanted to die.

Bergman reached out to touch the patient. Without ceasing its activities, the phymech extruded a chamois-mitt tentacle, and removed Bergman's hand. The hollow inflectionless voice of the robot darted from its throat-speaker:

"No interference please. This is against the rules."

Bergman drew back, horror stamped across his features, his skin literally crawling from the touch of the robot, and from the sight of the phymech operating steadily . . . on a corpse.

The operation was a success, as they had always quipped, but the patient was dead. Bergman felt nausea grip him with sodden fingers, and he doubled over, turning quickly toward the wall. He stared up at the empty observation bubble, thankful that this was a standard, routine operation and no viewers sat behind the clearness up there. He leaned against the feeder-trough of the instrument cabinets, and vomited across the sparkling grey plasteel tiles. A servomech skittered free of its cubicle and cleaned away the mess immediately.

It only heightened his sickness.

Machines cleaning up for machines.

He didn't bother finishing as assistant on the phymech's grisly operation. It would do no good; and besides, the phymech didn't need any help.

It wasn't human.

Bergman didn't show up at Memorial for a week; there was a polite inquiry from Scheduling, but when Thelma told them he was "just under the weather" they replied "well, the robot doesn't really need him anyhow" and that was that. Stuart Bergman's wife was worried, however.

Her husband lay curled on the bed, face to the wall, and mumbled the answers to her questions.

(Why didn't he *say* something! There just is no understanding that man. Oh well, no time to worry over that now . . . Francine and Sally are getting up the electromah jongg game at Sally's today. Dear, can you punch lunch for yourself? Well, really! Not even an answer, just that mumble. Oh well, I'd better hurry . . .)

Bergman's mind was in turmoil. He had seen a terrifying and a gut-wrenching thing. He had seen the robot fail. Miserably fail. For the first time since he had been subconsciously introduced to the concept of the phymech infallibility, he had seen it as a lie. The phymech was *not* perfect. The man had died under Bergman's eyes. Now Stuart Bergman had to reason why . . . and whether it had happened before . . . whether it would happen again . . . what it meant . . .

and what it meant to him, as well as the profession, as well as the world.

The phymech had *known* the man was in panic: the robot had instantly lowered the adrenalin count . . . but it had been more than that. Bergman had handled cases like that in the past, where improperly-delivered anaesthesia had allowed a patient to become conscious and see himself split open. But in such cases he had said a few reassuring words, had run a hand over the man's forehead, his eyes, and strangely-enough, that bit of bedside manner had been delivered in just such a proper way that the patient sank back peacefully into sleep.

But the robot had done nothing.

It had ministered to the body, while the mind shattered. Bergman had known even as the man had seen his bloody stumps, that the operation would fail.

Why had it happened? Was this the first time a man had died under the tentacles of a phymech, and if the answer was no . . . why hadn't he heard of it? When he stopped to consider, lost still in that horror maelstrom of memory and pain, he realized it was because the phymechs were still "Undergoing Observation." But while that went on—so sure were the manufacturers, and the officials of the Department of Medicine—lives were being lost in the one way that could not be charged to the robots.

An intangible factor was involved.

It had been such a simple thing. Just to tell the man, "You'll be all

right, fellow, take it easy. We'll have you out of here good as new in a little while . . . just settle back and get some sleep . . . and let me get my job done; we've got to work together, you know . . ."

That was all, just that much, and the life that had been in that mangled body would not have been lost. But the robot had stood there ticking, efficiently repairing tissue.

While the patient died in hopelessness and terror.

Then Bergman realized what it was a human had, a robot did not. He realized what it was a human could do that a robot could not. And it was so simple, so damnably simple, he wanted to cry. It was the human factor. They could *never* make a robot physician that was perfect, because a robot could not understand the psychology of the human mind.

Bergman put it into simple terms . . .

The phymechs just didn't have a bedside manner!

PATHS TO destruction.

So many paths. So many answers. So many solutions, and which of them was the right one? Were any of them the right ones? Bergman knew he must find out, knew he must solve this problem by his own hand, for perhaps no one else's hand would turn to the problem . . . until it was too late.

Each day that passed meant another life had passed.

And the thought cursed Bergman more than any personal danger. He had to try something; in his des-

peration, he came up with a plan of desperation.

He would kill one of his patients . . .

Once every two weeks, a human was assigned his own operation. True, he was more supervised than assisted by the phymech on duty, and the case was usually only an appendectomy or simple tonsillectomy . . . but it *was* an operation. And Lord knew the surgeons were grateful for any bone thrown them.

This was Bergman's day.

He had been dreading it for a week, thinking about it for a week, knowing what he must do for a week. But it had to be done. He didn't know what would happen to him, but it didn't really matter; if the people and the government could be shown what was going on in their hospitals . . .

What was to be done would have to be done boldly swiftly, sensationally. And now. It couldn't be put off any longer. For the papers had been running articles about the Secretary of Medicine's *new* Phymech Proposal. It would have to be now. Right now when the issue was important.

He walked into the operating room.

A standard simple operation. No one in the bubble.

The phymech assistant stood silently waiting by the feeder-trough. As Bergman walked across the empty room, the cubicle split open across the way, and a rolling phymech with a tabletop—on which the patient was lying—hurried to the operating table. The machine lowered the tabletop to the operat-

ing slab, and bolted it down quickly. Then it rolled away.

Bergman stared at the patient, and for a minute his resolve left him. She was a thin young girl with laugh-lines in her face that could never be erased . . . except by death.

Up till a moment ago Bergman had known he would do it, but now . . .

The girl looked up at him, and smiled with light blue eyes, and somehow Bergman's thoughts centered on his wife Thelma, who was nothing like this sweet, frail child. Thelma, whose insensitivity had begun in his life as humorous, and decayed through the barren years of their marriage till it was now a millstone he wore silently. Bergman knew he couldn't do what had to be done. Not to this girl.

The phymech applied the anaesthesia cone from behind the girl's head. She caught one quick flash of tentacled metal, her eyes widened, and then she was asleep. When she awoke, her appendix would be removed.

Bergman felt a wrenching inside him. This was the time. With Calkins so suspicious of him, with the phymechs getting stronger every day, this might be the last chance.

He prayed to God silently for a moment, then began the operation. Bergman carefully made a longitudinal incision in the right lower quadrant of the girl's abdomen, about four inches long. As he spread the wound, he saw this would be just an ordinary job. No peritonitis . . . and it hadn't ruptured. This would be a simple job,

eight or nine minutes at the longest.

Carefully, Bergman delivered the appendix into the wound. Then he securely tied it at the base, and feeling the tension of what was to come building in him, cut it across and removed it.

He began to close the abdominal walls tightly.

Then he asked God for forgiveness, and did what had to be done. It was not going to be such a simple operation, after all.

The scalpel was an electro-blade—thin as a whisper—and as he brought it toward the flesh, his plan ran through his mind. The spin of a bullet, the passage of a silver fish through quicksilver, the flick of a thought, but it was all there, in totality, completeness and madness . . .

He would sever an artery, the robot would sense what was being done, and would shoulder in to repair the damage. Bergman would slash another vein, and the robot would work at two jobs. He would slash again, and again, and yet again, till finally the robot would overload, and freeze. Then Bergman would overturn the table, the girl would be dead, there would be an inquiry and a trial, and he would be able to blame the robot for the death . . . and tell his story . . . make them check it . . . make them stop using phymechs till the problem had been solved.

All that as the electro-blade moved in his hand.

Then the eyes of the girl fastened to his own, closed for a moment to consider what he was doing. In

the darkness of his mind, he saw those eyes and knew finally:

What good was it to win his point, if he lost his soul?

The electro-blade clattered to the floor.

He stood there unmoving, as the phymech rolled near-silently beside him, and completed the routine closure.

He turned away, and left the operating room quickly.

He left the hospital shortly after, feeling failure huge in his throat. He had had his opportunity, and had not been brave enough to take it. But was that it? Was it another edge of that inner cowardice he had shown before? Or was it that he realized *nothing* could be worth the taking of an innocent girl's life? Ethics, soft-heartedness, what?

The night closed down stark and murmuring around Bergman. He stepped from the light blotch of the lobby, and the rain misted down over him, shutting him away from life and man and everything but the dark wool of his inner thoughts. It had been raining like this the night Calkins had intimidated him. Was it always to rain on him, throughout his days?

Only the occasional whirr of a copter ploughing invisibly across the sky overhead broke the steady machine murmur of the city. He crossed the silent street quickly.

The square block of darkness that was Memorial was dotted with the faint rectangles of windows. Lighted windows. The hollow laughter of bitterness bubbled up from his belly as he saw the lights. Concessions to Man . . . always

concessions by the Almighty God of the Machine.

Inside Bergman's mind, something was fighting to be free. He was finished now, he knew that. He had had the chance, but it had been the wrong chance. It could never be right if it started from something like that girl's death. He knew that, too . . . finally. But what was there to do?

And the answer came back hollowly: *Nothing*.

Behind him, where he could not see it, a movement of metal in the shadows.

Bergman walked in shadows, also. Thoughts that were shadows. Thoughts that led him only to bleak futility and despair. The Andrei Mechanical Physicians. *Phymechs*.

The word exploded in his head like a Roman candle, spitting sparks into his nerve ends. He never wanted to destroy so desperately in his life. All the years of fighting for medicine, and a place in the world of the healer . . . they were wasted.

He knew the phymechs weren't better than humans . . . but how could he prove it? Unsubstantiated claims, brought to Calkins, would only be met with more intimidation, and probably a revoking of his license. He was trapped solidly.

How much longer could it go on?

Behind him, mechanical ears tuned, robot eyes fastened on the slumping, walking man. Rain was no deterrent to observation.

The murmur of a copter's rotors caused Bergman to look up. He could see nothing through the

swirling rain-mist, but he could hear it, and his hatred reached out. Then: *I don't hate machines, I never did. Only now that they've deprived me of my humanity, now that they've taken away my life. Now I hate them.* His eyes sparked again with submerged loathing as he searched the sky beneath the climate dome, hearing the whirr of the copter's progress meshing with the faint hum of the dome at work; he desperately sought something against which he might direct his feelings of helplessness, of inadequacy.

So intent was he that he did not see the old woman who stepped out stealthily from the service entrance of a building, till she had put a trembling hand on his sleeve.

The shadows swirled about the shape watching Bergman—and now the old woman—from down the street.

"You a doctor, ain'cha?"

He started, his head jerking around spastically. His dark eyes focused on her seamed face only with effort. In confusion he found himself stammering. "Y-yes, why? What do you want?"

The old woman licked her lips. In the dim light of the illumepost that filtered through the rain, Bergman could see she was dirty and ill-kempt. Obviously from the tenements in Slobtown, way out near the curve-down edge of the climate dome.

She licked her lips again, fumbling in the pockets of her torn jumpette, nervous to the point of terror.

"Well? What do you want? Bergman was harsher than he had intended, but his banked-down antagonism prodded him into belligerence.

"I been watchin' for three days and Charlie's gettin' worse and his stomach's swellin' and I noticed you been comin' outta the hospital every day now for three days . . ." the words tumbled out almost incoherently, slurred by a gutter accent. To Bergman's tutored ear—subjected to these sounds since Kohlbenschlagg had taken him in—there was something else in the old woman's voice: the helpless tones of horror in asking someone to minister to an afflicted loved one.

Bergman's deep blue-black eyes narrowed. What was this? Was this filthy woman trying to get him to attend at her home? Was this perhaps a trap set up by Calkins and the Hospital Board? "What do you *want*, woman?" he demanded, edging away.

"Ya gotta come over ta see Charlie. He's dyin', Doctor, he's dyin'! He just lays there twitchin', and every time I touch him he jumps and starts throwin' his arms round and doublin' over an' everything!" Her eyes were wide with the fright of memory, and her mouth shaped the words hurriedly as though she knew she must get them out before the mouth used itself to scream.

The doctor's angry thoughts, suspicious thoughts, cut off instantly, and another part of his nature took command. Clinical attention centered on the malady the woman was describing.

“. . . an' he keeps *grinnin'*, Doctor, *grinnin'* like he was dead and everything was funny or somethin'! That's the worst of all . . . I can't stand ta see him that way, Doctor. Please . . . please . . . ya gotta help me. Help Charlie, Doc, he's dyin'. We been together five years an' ya gotta . . . gotta . . . do . . . somethin' . . .” She broke into convulsive weeping, her faded eyes pleading with him, her knife-edged shoulders heaving jerkily within the jumpette.

My God, thought Bergman, *she's describing tetanus! And a badly advanced case to have produced spasms and risus sardonicus. Good Lord, why doesn't she get him to the Hospital? He'll be dead in a day if she doesn't!* Aloud, he said, still suspicious, “Why did you wait so long? Why didn't you take him to the Hospital?” He jerked his thumb at the lighted block across the street.

All his earlier anger, plus the innate exasperation of a doctor confronted with seemingly callous disregard for the needs of a sick man, came out in the questions. Explodingly. The old woman drew back, eyes terrified, seamed face drawn up in an expression of horror.

“I—I *couldn't* take him there, Doc. I just *couldn't*! Charlie wouldn't let me, anyhow. He said, last thing before he started twitchin', he said, don't take me over there to that hospital, Katie, with them metal things in there, promise me ya won't. So I hadda promise him, Doc, and ya gotta come ta see him—he's dyin', Doc,

ya gotta help us, he's dyin'!”

She was close up to him, clutching at the lapels of his jumper with wrinkled hands; impossibly screaming in a hoarse whisper. The raw emotion of her appeal struck Bergman almost physically.

If a robocop should see the old woman talking to him, it might register his name, and that would be his end at Memorial. They'd have him tagged for home-practitioning, even if it wasn't true. How could he *possibly* attend this woman's man? It would be the end of his stunted career. The regulations swam before his eyes, and he knew what they meant. He'd be finished. And what if this *was* a trap?

But tetanus!

(The terrifying picture of a man in the last stages of lockjaw came to him. The contorted body, wound up on itself as though the limbs were made of rubber; the horrible face, mouth muscles drawn back and down in the characteristic death-grin every inch of the nervous system affected. A slamming door, a touch, a cough, was enough to send the stricken man into ghastly gyrations and convulsions. Till finally the affliction attacked the chest muscles, and he strangled horribly. Dead . . . wound up like a pretzel, frothing . . . dead.)

But to be thrown out of the Hospital. He couldn't take the chance. Almost without his realizing it, the words spat out: “Get away from me, woman; if the robocops see you, they'll arrest us both. Get away . . . and don't try ap-

proaching a Doctor like this again! Or I'll see that you're run in myself. Now get away. If you need medical aid, go to the phymechs at the hospital. They're free and better than any human!" The words sounded tinny in his ears.

The old woman fell back, light from the illumepost casting faint, weird shadows across the lined planes of her face. Her lips drew back from her teeth.

She snorted, "We'd rather die than go to them! We won't have no truck with them things . . . we thought you was still doctors to help the poor . . . but you ain't!" She turned and started to slip away into the darkness.

Faintly, before the rustle of her footsteps was gone, Stuart Bergman heard the sob that escaped her. It was filled with a wild desperation and the horror of seeing death in the mist, waiting for her and the man she loved.

Then, even more faintly . . .

"Damn you forever!"

Abruptly, the tension of the past months, the inner horror at what he had almost done to the blue-eyed girl earlier, the fright and sorrow within him, mounted to a peak. He felt drained, and knew if he was to be deprived of his heritage, he would lose it the right way. He was a doctor, and a man needed attention.

He took a step after her dim shape in the rain.

"Wait, I . . ."

And knowing he was sealing his own doom, he let her stop, watched the hope that swam up in her eyes, and said, "I—I'm sorry. I'm very

tired. But take me to your man. I'll be able to help him."

She didn't say thank you. But he knew it was there if he wanted it. They moved off together, and the watcher followed on silent treads.

THE STINK of Slobtown assaulted Bergman the moment they passed the invisible boundary. There was no "other side of the tracks" that separated this squalor from the lower middle-class huts of the city, but somehow there was no mistaking the transition.

They passed from cleanliness into the Inferno, with one step.

Shadows deepened, sounds muffled, and the flickering neon of out-dated saloon signs glared at them from the darkness. They threaded close to buildings, stepping wide around blacker alley mouths and empty lots. From time to time they heard the footpad of muggers and wineheads keeping pace with them, but when the noises became too apparent, the woman hissed into the darkness, "Geddaway from here! I'm Charlie Kickback's woman, an' I got a croaker fer Charlie!" And the sounds would fall behind.

All but the metal follower, whom no one saw.

The raw sounds of music spurted out of the swing-doors of a saloon, as they passed. A block further along, Bergman saw the battered remains of a robocop, lying up against a tenement. He nodded toward it, and in the dusk Charlie Kickback's woman shrugged. "Every stiff comes in here takes

his chances," she philosophized, "even them tinkertoys."

They kept moving, and Bergman realized he had much more to fear than merely being deprived of his license. He had a wallet with nearly three hundred credits in it, and they'd mugged men down here for much less than that, he was sure.

But somehow, the futility of the day, the horror of the night, were too insurmountable. He worried more about the fate of his profession, than the contents of his wallet.

Finally they came to a brightly-lit building, with tri-V photoblox outside, ten feet high. The blox showed monstrously-mammariated women doing a slow tri-V shimmy, their appendages swaying behind the thinnest of veils, that parted often.

Bergman inclined his head at the poster blox, at the signs, and asked, "Is he here?" Charlie Kickback's woman's face greyed-down and her lips thinned. She nodded, mumbled something, and led Bergman past the ticket window with its bulletproof glass and steel-suited ticket-taker. The woman snapped a finger at the taker, and a heavy plasteel door slid back for them. The moment it opened, tinny music, fraught with the bump and grind of the burlesque since time immemorial, swept over them.

They passed the open back of the theatre, and Bergman's eyes caught the idle twist of flesh, and the sensuous beat of naked feet on a stage. The sounds of laughter and applause sifted up through the blaring music.

The woman led him down a hall, and past several dim grey doors with peeling paint. She stopped before a door with a faded star on it, and said, "He-he's in h-here . . ." and she palmed the door open quietly.

She had not needed the silence.

Charlie Kickback would never writhe at a sound again.

He was quite dead.

Twisted in on himself, he lay on the floor beneath the dirty sink, one leg twisted under himself so painfully, it had broken before death.

The old woman fell to her knees, burying her face in his clothing, crying, namelessly seeking after him. She cried solidly for a few minutes, while Bergman stood watching, his heart filled with pity and sorrow and unhappiness and frustration.

This never would have happened, if . . .

The woman looked up, and her face darkened. "We can't stay alive even no more, 'cause of them! It's your . . ."

She burst into tears again, and fell back on the inert body of her lover. Bergman knew she was right. The phymechs had killed this man as surely as if they had slashed his pulmonary artery.

He turned to leave, and then it was that the follower leaped on him.

It had followed him carefully through Slobtown, it had immobilized the ticket-taker, it had snaked a tentacle through the ticket window to key open the door, and had tracked him with internal radex.

Bergman stopped dead at the door, as the robocop rolled up, and its tentacles slammed out at him. "Help!" was the first thing he could yell, and as he did so, the woman lifted her streaked face from the dead man, saw the robot, and went berserk.

Her hand dipped to the hem of her skirt, and lifted, exposing leg, slip, and a thigh-holster.

An acidee came up in her fist, and as she pressed the stud, a thin unspashing stream of vicious acid streaked over Bergman's head, and etched a line across the robocop's hood. Its faceted light-sensitives turned abruptly, fastened on the woman, and a stunner tentacle snaked out, beamed her in her tracks.

As Bergman watched, the robocop suddenly letting him loose in concentration on the woman, the acidee dropped from her hand, and she spun backward, fell in a heap next to the dead man.

Everything totaled for Bergman. The phymechs, the death of the thresher victim, the Oath, and the way he had almost shattered it tonight, the death of Charlie, and now this robocop that was the Mechanical God in its vilest form. It all summed up, and Bergman lunged around the robocop, trying to upset it.

It rocked back on its settlers, and tried to grab him. He avoided a tentacle, and streaked out into the hall. The punctuated, syncopated, stop-beat of the music welled over him, and he cast about in desperation. Leaning against one wall he saw a long, thick-handled metal

bar with a screw-socket on its top, for removing the outdated light units from the high ceilings.

He grabbed it, and turned on the robocop as it rolled slowly after him. His back to the wall, he held it first like a staff, then further down the handle, angling it. As the robocop approached, Bergman lunged, and brought his hatred to the surface. The club came down, and smashed with a muted twangggg! across the robocop's hood. But it kept coming, steadily.

Bergman continued to smash at it.

His blows landed ineffectually, many of them missing entirely, but he struggled and smashed and smashed and smashed and his scream rose over the music, "Die, you bastard rotten chunk of tin, die, die, and let us alone so we can die in peace when we have to . . ."

Over and over, even after the robocop had taken the club from him, immobilized him, and slung him "fireman's-carry" over his tote-area.

All the way back from Slobtown to the jail, to stand trial for home practicing, collusion, assaulting a robocop, he screamed his hatred and defiance.

Even in his cell, all night long, in his mind, the screams continued. On into the morning, when he found out Calkins had had the robocop trailing him for a week. Suspecting him of just what had happened, long before it had happened. Hoping it would happen. Now it had happened.

And Stuart Bergman had come to the end of his career.

The end of his life.

He went on trial at 10:40 A.M., with the option of human (fallible) jury, or robotic (infallible) jury-mech.

Irrationally, he chose the human jury.

An idea, a hope, had flared in the darkness of this finality. If he was going down, Bergman was not going down a coward. He had run long enough. This was another chance.

He meant to make the most of it.

THE COURTROOM was silent. Totally and utterly silent, primarily because the observer's bubble was soundproofed, and each member of the jury sat in a hush-cubicle. The jurymen each wore a speak-tip in one ear, and a speaker let the audience know what was happening.

Halfway up the wall, beside the judge's desk, the accused's bubble clung to the wall like a teardrop. Stuart Bergman had sat there throughout the trial, listening to the testimony: the robocop, Calkins (on the affair at the hospital, the day Kohlbenschlagg had died; the affair of the Lounge; the suspicion and eventual assigning of a robocop to trail the doctor; Bergman's general attitudes, his ability to have performed the crime of which he had been accused), the old woman, who was pentatholed before she would speak against Bergman, and even Murray Thomas, who reluctantly admitted that Bergman was quite capable of breaking the law in this case.

Thomas's face was strained and broken and he left the stand, staring up at Bergman with a mixture of remorse and pity burning there.

The time was drawing near, and Bergman could feel the tension in the room. This was the first such case of its kind . . . the first flagrant breaking of the new Hippocratic Laws, and the newsfax and news sheet men were here in hordes; for a precedent was to be set . . .

The anti-mech leagues and the humanitarian organizations were here also. The case was a sensational one, mostly because it was the first of its kind, and would set the future pattern. Bergman knew he had to take good advantage of that.

And he also knew that advantage would have been lost, had he chosen a robot jurymech to try the case.

The nice things about humans tied in with their irrationality. They were human, they could see the human point of view. A robot would see the robotic point of view. Bergman desperately needed that human factor.

This had grown much larger than just his own problems of adaptation. The fate of the profession lay in his hands, and uncounted lives, lost through stupidity and blind dead faith in the all-powerful God of the Machine.

Deux ex machina, Bergman thought bitterly, *I'm going to give you a run for your rule today!*

He waited silently, listening to the testimonies, and then, finally, his turn came to speak.

He told them a story, from the accused's bubble. Not one word of

(Continued on page 114)



Illustrated by Paul Orban

The Birds and the Bees

Which goes to prove that,

in some instances, being

heroic is easy!

BY DAVE E. FISHER

I WAS WANDERING among the tall grass of the slopes, listening to the soft whistling of the wind; allowing the grass to caress my toga and thighs. It was a day soft and clear; a day accepted by the young, cherished by we old. Across the gently undulating hills stood the magnificent Melopolis, encradling the Oracle of Delni. I do not, of course, believe in the gods per se; still there is a grandeur in the very stones that transcends their human

sculptors, and it is no wonder to me that many cling tenaciously, and ignorantly, to the old religion. Cling to the gods of old, who drew man upward from wherever he began. In whose names Man killed and plundered, while struggling up. In whose names Man finally left this earth, to seek his cousins among the stars.

But of course there were no cousins. There was nothing. And Man returned, and settled down to live. Saddened, but resigned and content to live in peace with his knowledge and his power. Gone now are all the ancient evils, wars, emergencies.

"Sias! Sias—" And they were upon me.

That is, Xeon was upon me. But I knew that where Xeon is, Melia must soon appear. And indeed it was but a moment before Melia slipped through the high grass to stand at his side. Their youthful voices were babbling in excitement.

Melia was a She, with the swelling breasts that were, so tradition states, quite prevalent among members of the race long ago, and are seldom seen today. Indeed, Melia was on this account made the butt of many jokes and, I fear, would have had a lonely life of it had it not been for the friendship of Xeon.

"Sias," they were saying, "the Maternite's gone."

I stared in amazement.

"Gone? It cannot be gone. It has always been—"

"Oh my gods!" Xeon shouted. "I tell you it's gone! Will you—"

Melia interrupted him quietly.

"Xeon, will you lose all respect for the Elder?" Then turned to me, and said calmly, "The watcher at the Maternite Machine, it appears, has been drunk. The heat rose above the warning, continued to rise, and then—poof. Everything has evaporated in Maternite. All the Pre-life is gone."

"All of it?" I asked.

"There is nothing left," Melia insisted. "Can more be made? And if not, what will happen with no more children?"

"That is for the priests to say, not I," I replied. In moments of emergency, it is wise to speak with caution. That is, I suppose so. I have never before been in a real emergency.

A man my age does not hurry in the heat of the midday sun—mad-dogs nenglishmin go out in the midday sun, as the ancients say, although I often wonder why—but Xeon and Melia ran all the way down to the city. They are of an age to enter manhood, and have all the energy such young men do.

As we entered the city, we were surrounded by confusion and consternation. And can the simple people be blamed? They were aware that they stood in the midst of an unprecedented happening; indeed, an emergency. For a machine had failed!

Not in the memory of the eldest among us has a machine failed. They were created so long ago, indeed, that the ignorant believe them to have been constructed by the gods themselves. And never, so far as I know, has one failed. Small

wonder that the watcher had been negligent. Indeed, the watcher is more a tradition than a necessity. Besides, had he been sober, he would not have known what to do. For who knows the mysterious workings of the machines?

I hastened to the City Hall and found the Conclave assembled, waiting for me to bring them to order. Xeon and Melia stopped as I mounted the steps, but I smiled and motioned them in. They accompanied me past the marble pillars into the cool recesses of the Hall, then seated themselves on the floor as I took my place by the great table.

Well, you know how these things are. At such a time, many men feel impelled to make speeches, and one must not be disrespectful. Prayers and supplications were offered to the gods, priests were sent to sacrifice, and finally, as the light of the sun was falling between the pillars, the High Priest of the Maternite Machine was heard.

He rambled through the customary opening remarks and then, continually smoothing his white beard—of which he is excessively proud—approached the crux of the matter and the Conclave finally heard the facts it had assembled to hear. By this time, unfortunately, many of the Conclave had departed for home and supper. Yet perhaps it is for the best, for those left were the most earnest and intelligent.

"I would not bore you," he said, "with details of which only the gods are sure. Know, then, that once granted a few cells of Prelife, it is

an easy matter for the Maternite Machine to add more and more; thus assuring us, as has always been, a continuous source of Prelife to be born by the Generating Machine as children. The machines bear the exact number of children each year to balance the number of us whom the gods claim. Such it has always been from time immemorial."

A murmur of assent and approval of these virtuous words whispered around the Hall.

"But now," he continued, however, with less assurance and indeed with even a stutter here and there, "an unprecedented situation has arisen. Indeed, I might call it an emergency. For the M-Maternite Machine has actually failed."

Cries of "Treason" sprang up, and I fear it might have gone hard for the priest had I not been able to insure order.

"That is not the worst," he cried, as if in defiance. "All the Prelife has been dried up. It will not function. There is no more. And there will be no more children!"

At this I feared the Conclave was about to riot. It is at such times that I most revere the wisdom of the ancients, who decreed seventy years the minimum age for a member of the Conclave. They shouted and began to beat their fists, but for how long can a man of seventy years roar like a youngster? They quieted, breathing heavily, and I asked,

"Is there no way, then, to produce more Prelife in order that the machines may produce more children for us?"

"As I have said," he replied,

"give the machines but a bit of Pre-life and they will produce more. But take away that least bit, and they are helpless."

Such heresy could have brought a sad end to the priest had not the Conclave been so exhausted by the events of the day. We leaned back to think.

Rocsates leaned forward and asked, "Must there not—must there not have been a beginning to Pre-life? For the Machine, it seems, cannot make it; and yet it came from somewhere."

"Riddles are not called for," I answered severely.

"Are not riddles often the beginning of knowledge?" he asked, in that irritating dumber-than-thou attitude of his. "Must there not, long ago, have been a source of Pre-life: a source now forgotten? And may it not even now—should we discover it—be available to us? I am reminded of the story of the animals of old—"

"I fear your mind is wandering, Rocsates," I was forced to interrupt. "I know well the legend of the animals, but what does it have to do—" The heads of the Conclave were turning to me, quizzically. I hastened to explain the legend of the animals. "It is said that many thousands of years ago, time without reckoning, there existed on the earth creatures who were alive like us, and yet not like us. It is said they had four legs or more, and no arms, were covered with hair, and although not mute, they could not speak."

Rocsate's voice made itself heard. "It is true. Such creatures did in-

deed exist. It is recorded most scientifically in the films."

"If it be so," I said, quieting the hub-bub that followed, "and I would not doubt your word, Rocsates, for all know you are the wisest of men—if it were so, then, what of it?"

"May it not be," Rocsates put in, "that these animals had no machines to reproduce their kind? For surely the gods would not grant machines to such creatures. And indeed, if they had Maternite Machines, why then we would yet have these animals among us."

"And how, then, did these animals reproduce?" I asked.

"How, indeed? And is there not a legend—admitted only a legend—that says there was a time before the machines, and before the Maternite Machine, and that at such a time both the animals and Men reproduced from within their own bodies?"

At this two members of the Conclave fell immediately into a faint, and I would gladly have joined them. I hoped that the youngsters, Xeon and Melia, had not heard, but as I turned they were listening most attentively to Rocsates, who, amid cries of "Heresy" and "Treason", went on:

"I should like to ask the Conclave for permission to search the ancient records, in the hope of finding some such knowledge that would prove or disprove my words."

"You wish to search the films—" I began.

"Not the films, Sias, but the books."

Gods, this Rocstates! The books, as well he knows, are so ancient, and so delicate, that they are kept in an air-tight tomb; lest, being handled, they be destroyed and all knowledge within them lost. Therefore, they have not been read in the known history of our race. And Rocstates has been anxious for an excuse—

“Sias,” he went on, “if there exists such knowledge as I seek, is it not indeed lost to the memory of Man? And if so, are not the books the only place where it may be found?”

Rocstates, it is suspected, will never ask a question unless he knows the answer beforehand. And so I acquiesced, and agreed, and granted permission. And with much misgiving and foreboding of evil, the Conclave adjourned.

SEVERAL WEEKS elapsed before Rocstates requested that the Conclave meet. I called the meeting at dawn and so it was yet early in the afternoon when formalities were concluded and Rocstates granted leave to speak.

“Some of those among you are She’s” he began. “And you know you are different from the rest of us. To the advantage, your skin is fairer and your features more often handsomer than ours. To the disadvantage, your excretory system is not so mechanically dextrous as ours. And, you may say, why should this not be so? There is, indeed, no reason why we should all be identical. Perforce you have the advantage, perforce we do. Yet there is

one other distinction.

“Some among you She’s have the swelling of the breasts. And does there exist no reason for this? Was there not, perhaps in ancient times, a cause for this? Do you not wonder, She’s, whence you come and for what reason?”

“Rocstates,” I interrupted. “All this is fascinating, of course. But if you could be quick—”

“Of course,” he replied. “In the course of my reading I have read many books, and while they are all vague on the subject, this I have discovered:

“That there was indeed a time before the machines, in fact the books were created in that time, for not one of them mentions the machines. Then reproduction was carried on by individuals, without help of the then nonexistent machines. The She’s are not wanderers from another land, but they have lived with us for all time; they are not another race, but we are all types of one race. And the fact of reproduction is somehow intimately related to the physical distinctions of the She’s!”

These last sentences were shouted to be heard above the roar of the crowd. Yet when Rocstates stopped, so also did the noise, so shocked and amazed at his words were they. And I confess, myself also.

“In fact,” Rocstates added, sitting down, “this process of reproduction seems to have been so simple that there was once a problem of overpopulation.”

Order was lost among the Conclave as each man turned to speak to his neighbor, and for some time

I could not restore order. I realized that something had to be done to save Rocsates before the outrage of the assembled overwhelmed him.

"It seems," I shouted, "that there is a flaw in your logic." For if such there was, I was hopeful of dismissing the entire affair with no harm done. "For if people reproduced too often, why then this reproduction must have been a pleasant thing to do; otherwise they would not have done so to excess. And if it was a pleasant thing to do, where is the necessity for the machines, and why were they created?"

Rocsates seemed perplexed by this problem, whereupon Xeon, who together with Melia were at the Conclave without permission, shouted, "Perhaps the process of reproduction was of *such* a pleasure that the Conclave ruled it to be a sin? And therefore the machines were necessary!"

At this impudence the Conclave dissolved in an uproar, and I was beyond power to restrain them from placing Xeon under arrest. Privately, however, I had to admit that his supposition was a possibility, and thus I authorized Rocsates to continue his search.

Now indeed I was sorely worried concerning Xeon, for he must languish in the dungeon until the Conclave is satisfied to release him, and this they cannot do until they meet again.

I needed a sufficient excuse to call a meeting of the Conclave, whereupon I might argue for the lad. When I heard that Rocsates again desired audience, I immedi-

ately proclaimed a meeting of the Conclave to be held the next day at dawn, and so that night slept well.

The Conclave had come to order and formalities had been initiated when Rocsates entered and took his place. He clutched under one shoulder a thin, rectangular object, but that is not what impressed me. His appearance—he looked as if he had not slept of late, nor eaten either. His eyes were sunken, and his features had doubled in age. He was bent and tired. But it was his eyes. There was a horror in them.

I was shocked, and could not help staring at him. And then the formalities were over. I intended to speak for Xeon, but Rocsates was on his feet and I gave way.

"I have indeed discovered the secret of reproduction," he began. "After many searchings, I came upon this—" and he held forth the object he had carried in. "It is a book. It is entitled, 'Living a Normal Sex Life.' It seems to be some sort of a do-it-yourself pamphlet." He dropped the book on the table and rubbed his hands over his eyes.

There was something in the man's behavior that commanded everyone's attention. He went on, speaking low. "The word 'Sex' is not defined, but it seems to mean . . ." His words trailed off. He was obviously unsure of how to continue. "I had better start at the beginning, I suppose," he said. "You see, once upon a time there were birds and bees . . ."

When he finished the Conclave sat in horrified silence. His words,

with all their horror, had the ring of truth and there were no cries of 'Heresy'. There was only stunned disbelief and the beginnings of nausea.

It is the mark of honor that a leader shall carry on when others fear to move. I cleared my throat.

"Shall not these organs which you mention have atrophied by now? With no use throughout all these generations, will they not have evolved into nothingness?"

"I do not think so," Rocsates replied after a while. "What to us is an eon, to evolution is but an instant. And then the swelling of the breasts, I believe, proves that there is still reproductive activity in some, at least, of the She's."

We sat shaking our heads, bowed under terrible reality.

"Then we must experiment," I said. "But whom could we ask to submit to such horror?"

"I have already taken the liberty of asking for volunteers," Rocsates replied. "The She, of course, must be one with the swelling of the breasts. Melia has volunteered, on condition that Xeon be released from dungeon. Are there any objections?"

There were none, of course. Who would refuse a boon to one who would undergo such an ordeal for the City?

"And who will be the partner?" I asked.

"In all honor, could Xeon allow Melia to surpass him in courage? It shall be he," Rocsates said. And with his word the two entered the Hall and stood, noble and naked.

Rocsates gestured to the table,

and Melia started to climb upon it, but Xeon stepped forward.

"My lords," he said, "would not better results be obtained were we to conduct the experiment in the fields before the Oracle of Delni, that the gods may help us?"

His glance reached into my soul, and I was proud of Xeon. A true friend, he thought even now of the comfort of Melia. The marble table was indeed hard, and from Rocsate's description it seemed that Melia's position would be as uncomfortable as it would be undignified. The soft fields might be some slight help.

I voiced my assent, and the entire Conclave adjourned to the fields.

IT WAS nearly dark when we walked home, Rocsates and I, arm in arm. It had been a horrible day. The inhuman indignity, the cries—

We tarried before my home, leaned on the stone, stared at the first stars.

"They seemed finally to accomplish all the book described," I muttered.

"They may indeed have succeeded," Rocsates replied. "There is mentioned a time lapse which is necessary. The child does not appear immediately."

"It doesn't matter," I said consolately. "Who could ask them to go through such an ordeal again?"

And then I looked down to earth again, and saw them standing before me. Melia cast her eyes down,

(Continued on page 115)

BRAMBLE BUSH

*There was a man in our town, and he was
wondrous wise;*

*He jumped into a bramble bush and
scratched out both his eyes.*

*And when he saw what he had done, with
all his might and main*

*He jumped into another bush and scratched
them in again.*

MOTHER GOOSE

DR. DAVID LESSING found Jack Dorffman and the boy waiting in his office when he arrived at the Hoffman Center that morning. Dorffman looked as though he'd been running all night. There were dark pouches under his eyes; his heavy unshaven face seemed to sag at every crease. Lessing glanced sharply at his Field Director and sank down behind his desk with a sigh. "All right, Jack—what's wrong?"

"This kid is driving me nuts," said Dorffman through clenched teeth. "He's gone completely hay-

BY ALAN E. NOURSE



Illustrated by Paul Orban

wire. Nobody's been able to get near him for three weeks, and now at six o'clock this morning he decides he's leaving the Farm. I talk to him, I sweat him down, I do everything but tie him to the bed, and I waste my time. He's leaving the Farm. Period."

"So you bring him down here," said Lessing sourly. "The worst place he could be, if something's really wrong." He looked across at the boy. "Tommy? Come over and sit down."

There was nothing singular about the boy's appearance. He was thin, with a pale freckled face and the guileless expression of any normal eight-year-old as he blinked across the desk at Lessing. The awkward grey monitor-helmet concealed a shock of sandy hair. He sat with a mute appeal in his large grey eyes as Lessing flipped the reader-switch and blinked in alarm at the wildly thrashing pattern on the tape.

The boy was terrorized. He was literally pulsating with fear.

Lessing sat back slowly. "Tell me about it, Tommy," he said gently.

"I don't want to go back to the Farm," said the boy.

"Why?"

"I just don't. I hate it there."

"Are you frightened?"

The boy bit his lip and nodded slowly.

"Of me? Of Dr. Dorffman?"

"No. Oh, no!"

"Then what?"

Again the mute appeal in the boy's eyes. He groped for words, and none came. Finally he said, "If I could only take this off—" He fingered the grey plastic helmet.

"You think *that* would make you feel better?"

"It would, I know it would."

Lessing shook his head. "I don't think so, Tommy. You know what the monitor is for, don't you?"

"It stops things from going out."

"That's right. And it stops things from going in. It's an insulator. You need it badly. It would hurt you a great deal if you took it off, away from the Farm."

The boy fought back tears. "But I don't want to go back there—" The fear-pattern was alive again on the tape. "I don't feel good there. I never want to go back."

"Well, we'll see. You can stay here for a while." Lessing nodded at Dorffman and stepped into an adjoining room with him. "You say this has been going on for *three weeks*?"

"I'm afraid so. We thought it was just a temporary pattern—we see so much of that up there."

"I know, I know." Lessing chewed his lip. "I don't like it. We'd better set up a battery on him and try to spot the trouble. And I'm afraid you'll have to set it up. I've got that young Melrose from Chicago to deal with this morning—the one who's threatening to upset the whole Conference next month with some crazy theories he's been playing with. I'll probably have to take him out to the Farm to shut him up." Lessing ran a hand through sparse grey hair. "See what you can do for the boy downstairs."

"Full psi precautions?" asked Dorffman.

"Certainly! And Jack—in this case, be *sure* of it. If Tommy's in

the trouble I think he's in, we don't dare risk a chance of Adult Contact now. We could end up with a dead boy on our hands."

Two letters were waiting on Lessing's desk that morning. The first was from Roberts Bros., announcing another shift of deadline on the book, and demanding the galley proofs two weeks earlier than scheduled. Lessing groaned. As director of psionic research at the Hoffman Medical Center, he had long since learned how administrative detail could suck up daytime hours. He knew that his real work was at the Farm—yet he hadn't even been to the Farm in over six weeks. And now, as the book approached publication date, Lessing wondered if he would ever really get back to work again.

The other letter cheered him a bit more. It bore the letterhead of the International Psionics Conference:

Dear Dr. Lessing:

In recognition of your position as an authority on human Psionic behavior patterns, we would be gratified to schedule you as principle speaker at the Conference in Chicago on October 12th. A few remarks in discussion of your forthcoming book would be entirely in order—

They were waiting for it, then! He ran the galley proofs into the scanner excitedly. They knew he had something up his sleeve. His earlier papers had only hinted at the direction he was going—but the

book would clear away the fog. He scanned the title page proudly. "A Theory of Psionic Influence on Infant and Child Development." A good title—concise, commanding, yet modest. They would read it, all right. And they would find it a light shining brightly in the darkness, a guide to the men who were floundering in the jungle of a strange and baffling new science.

For they were floundering. When they were finally forced to recognize that this great and powerful force did indeed exist in human minds, with unimaginable potential if it could only be unlocked, they had plunged eagerly into the search, and found themselves in a maddening bramble bush of contradictions and chaos. Nothing worked, and everything worked too well. They were trying to study phenomena which made no sense, observing things that defied logic. Natural laws came crashing down about their ears as they stood sadly by and watched things happen which natural law said could never happen. They had never been in this jungle before, nor in any jungle remotely like it. The old rules didn't work here, the old methods of study failed. And the more they struggled, the thicker and more impenetrable the bramble bush became—

But now David Lessing had discovered a pathway through that jungle, a theory to work by—

At his elbow the intercom buzzed. "A gentleman to see you," the girl said. "A Dr. Melrose. He's very impatient, sir."

He shut off the scanner and said, "Send him in, please."

DR. PETER MELROSE was tall and thin, with jet black hair and dark mocking eyes. He wore a threadbare sport coat and a slouch. He offered Lessing a bony hand, then flung himself into a chair as he stared about the office in awe.

"I'm really overwhelmed," he said after a moment. "Within the stronghold of psionic research at last. And face to face with the Master in the trembling flesh!"

Lessing frowned. "Dr. Melrose, I don't quite understand—"

"Oh, it's just that I'm impressed," the young man said airily. "Of course, I've seen old dried-up Authorities before—but never before a brand spanking new one, just fresh out of the pupa, so to speak!" He touched his forehead in a gesture of reverence. "I bow before the Oracle. Speak, oh Motah, live forever! Cast a pearl at my feet!"

"If you've come here to be insulting," Lessing said coldly, "you're just wasting time." He reached for the intercom switch.

"I think you'd better wait before you do that," Melrose said sharply, "because I'm planning to take you apart at the Conference next month unless I like everything I see and hear down here today. And if you don't think I can do it, you're in for quite a dumping."

Lessing sat back slowly. "Tell me—just what, exactly, do you want?"

"I want to hear this fairy tale you're about to publish in the name of 'Theory,'" Melrose said. "I want to see this famous Farm of yours up in Connecticut and see for myself how much pressure these experi-

mental controls you keep talking about will actually bear. But mostly, I want to see just what in psionic hell you're so busy making yourself an Authority about." There was no laughter in the man's sharp brown eyes.

"You couldn't touch me with a ten foot pole at this conference," snapped Lessing.

The other man grinned. "Try me! We shook you up a little bit last year, but you didn't seem to get the idea."

"Last year was different." Lessing scowled. "As for our 'fairy tale', we happen to have a staggering body of evidence that says that it's true."

"If the papers you've already published are a preview, we think it's false as Satan."

"And our controls are above suspicion."

"So far, we haven't found any way to set up logical controls," said Melrose. "We've done a lot of work on it, too."

"Oh, yes—I've heard about your work. Not bad, really. A little misdirected, is all."

"According to your Theory, that is."

"Wildly unorthodox approach to psionics—but at least you're energetic enough."

"We haven't been energetic enough to find an orthodox approach that got us anywhere. We doubt if you have, either. But maybe we're all wrong." Melrose grinned unpleasantly. "We're not unreasonable, your Majesty. We just ask to be shown. If you dare, that is."

Lessing slammed his fist down on the desk angrily. "Have you got the day to take a trip?"

"I've got 'til New Year."

Lessing shouted for his girl. "Get Dorffman up here. We're going to the Farm this afternoon."

The girl nodded, then hesitated. "But what about your lunch?"

"Bother lunch." He gave Melrose a sidelong glare. "We've got a guest here who's got a lot of words he's going to eat for us . . ."

Ten minutes later they rode the elevator down to the transit levels and boarded the little shuttle car in the terminal below the Hoffman Center. They sat in silence as the car dipped down into the rapid-transit channels beneath the great city, swinging northward in the express circuit through Philadelphia and Camden sectors, surfacing briefly in Trenton sector, then dropping underground once again for the long pull beneath Newark, Manhattan and Westchester sectors. In less than twenty minutes the car surfaced on a Parkway channel and buzzed north and east through the verdant Connecticut countryside.

"What about Tommy?" Lessing asked Dorffman as the car sped along through the afternoon sun.

"I just finished the prelims. He's not cooperating."

Lessing ground his teeth. "I should be running him now instead of beating the bushes with this—" He broke off to glare at young Melrose.

Melrose grinned. "I've heard you have quite a place up here."

"It's—unconventional, at any rate," Lessing snapped.

"Well, that depends on your standards. Sounds like a country day school, from what I've heard. According to your papers, you've even used conventional statistical analysis on your data from up here."

"Until we had to throw it out. We discovered that what we were trying to measure didn't make sense in a statistical analysis."

"Of course, you're sure you were measuring *something*."

"Oh, yes. We certainly were."

"Yet you said that you didn't know what."

"That's right," said Lessing. "We don't."

"And you don't know *why* your instruments measure whatever they're measuring." The Chicago man's face was thoughtful. "In fact, you can't really be certain that your instruments are measuring the children at all. It's not inconceivable that the *children* might be measuring the *instruments*, eh?"

Lessing blinked. "It's conceivable."

"Mmmm," said Melrose. "Sounds like a real firm foundation to build a theory on."

"Why not?" Lessing growled. "It wouldn't be the first time the tail wagged the dog. The psychiatrists never would have gotten out of their rut if somebody hadn't gotten smart and realized that one of their new drugs worked better in combatting schizophrenia when the doctor took the medicine instead of the patient. That was quite a wall to climb."

"Yes, wasn't it," mused Melrose, scratching his bony jaw. "Only took them seventy years to climb it, thanks to a certain man's theories. I wonder how long it'll take psionics to crawl out of the pit you're digging for it?"

"We're not digging any pit," Lessing exploded angrily. "We're exploring—nothing more. A phenomenon exists. We've known that, one way or another, for centuries. The fact that it doesn't seem to be bound by the same sort of natural law we've observed elsewhere doesn't mean that it isn't governed by natural law. But how can we define the law? How can we define the limits of the phenomenon, for that matter? We can't work in the dark forever—we've *got* to have a working hypothesis to guide us."

"So you dreamed up this 'tadpole' idea," said Melrose sourly.

"For a working hypothesis—yes. We've known for a long time that every human being has extra-sensory potential to one degree or another. Not just a few here and there—every single one. It's a differentiating quality of the human mind. Just as the ability to think logically in a crisis instead of giving way to panic is a differentiating quality."

"Fine," said Melrose. "Great. We can't *prove* that, of course, but I'll play along."

Lessing glared at him. "When we began studying this psi-potential, we found out some curious things. For one thing, it seemed to be immensely more powerful and active in infants and children than in adults. Somewhere along the

line as a child grows up, something happens. We don't know what. We do know that the child's psi-potential gradually withdraws deeper and deeper into his mind, burying itself farther and farther out of reach, just the way a tadpole's tail is absorbed deeper and deeper into the growing frog until there just isn't any tail any more." Lessing paused, packing tobacco into his pipe. "That's why we have the Farm—to try to discover why. What forces that potential underground? What buries it so deeply that adult human beings can't get at it any more?"

"And you think you have an answer," said Melrose.

"We think we might be near an answer. We have a theory that explains the available data."

The shuttle car bounced sharply as it left the highway automatics. Dorffman took the controls. In a few moments they were skimming through the high white gates of the Farm, slowing down at the entrance to a long, low building.

"All right, young man—come along," said Lessing. "I think we can show you our answer."

IN THE main office building they donned the close-fitting psionic monitors required of all personnel at the Farm. They were of a hard grey plastic material, with a network of wiring buried in the substance, connected to a simple pocket-sized power source.

"The major problem," Lessing said, "has been to shield the children from any external psionic

stimuli, except those we wished to expose them to. Our goal is a perfectly controlled psi environment. The monitors are quite effective—a simple Renwick scrambler screen.”

“It blocks off all types of psi activity?” asked Melrose.

“As far as we can measure, yes.”

“Which may not be very far.”

Jack Dorffman burst in: “What Dr. Lessing is saying is that they seem effective for our purposes.”

“But you don’t know why,” added Melrose.

“All right, we don’t know why. Nobody knows why a Renwick screen works—why blame us?” They were walking down the main corridor and out through an open areaway. Behind the buildings was a broad playground. A baseball game was in progress in one corner; across the field a group of swings, slides, ring bars and other playground paraphernalia was in heavy use. The place was teeming with youngsters, all shouting in a fury of busy activity. Occasionally a helmeted supervisor hurried by; one waved to them as she rescued a four-year-old from the parallel bars.

They crossed into the next building, where classes were in progress. “Some of our children are here only briefly,” Lessing explained as they walked along, “and some have been here for years. “We maintain a top-ranking curriculum—your idea of a ‘country day school’ wasn’t so far afield at that—with scholarships supported by Hoffman Center funds. Other children come to us—foundlings, desertees, children from broken homes, children of all ages

from infancy on. Sometimes they stay until they have reached college age, or go on to jobs. As far as psionics research is concerned, we are not trying to be teachers. We are strictly observers. We try to place the youngsters in positions where they can develop what potential they have—*without* the presence of external psionic influences they would normally be subject to. The results have been remarkable.”

He led them into a long, narrow room with chairs and ash trays, facing a wide grey glass wall. The room fell into darkness, and through the grey glass they could see three children, about four years old, playing in a large room.

“They’re perfectly insulated from us,” said Lessing. “A variety of recording instruments are working. And before you ask, Dr. Melrose, they are all empirical instruments, and they would all defy any engineer’s attempts to determine what makes them go. We don’t know what makes them go, and we don’t care—they go. That’s all we need. Like that one, for instance—”

In the corner a flat screen was flickering, emitting a pale green fluorescent light. It hung from the wall by two plastic rods which penetrated into the children’s room. There was no sign of a switch, nor a power source. As the children moved about, the screen flickered. Below it, a recording-tape clicked along in little spurts and starts of activity.

“What are they doing?” Melrose asked after watching the children a few moments.

“Those three seem to work as a

team, somehow. Each one, individually, had a fairly constant recordable psi potential of about seventeen on the arbitrary scale we find useful here. Any two of them scale in at thirty-four to thirty-six. Put the three together and they operate somewhere in the neighborhood of six hundred on the same scale." Lessing smiled. "This is an isolated phenomenon—it doesn't hold for any other three children on the Farm. Nor did we make any effort to place them together—they drew each other like magnets. One of our workers spent two weeks trying to find out why the instruments weren't right. It wasn't the instruments, of course."

Lessing nodded to an attendant, and peered around at Melrose. "Now, I want you to watch this very closely."

He opened a door and walked into the room with the children. The fluorescent screen continued to flicker as the children ran to Lessing. He inspected the block tower they were building, and stooped down to talk to them, his lips moving soundlessly behind the observation wall. The children laughed and jabbered, apparently intrigued by the game he was proposing. He walked to the table and tapped the bottom block in the tower with his thumb.

The tower quivered, and the screen blazed out with green light, but the tower stood. Carefully Lessing jogged all the foundation blocks out of place until the tower hung in midair, clearly unsupported. The children watched it closely, and the foundation blocks inched

still further out of place . . .

Then, quite casually, Lessing lifted off his monitor. The children continued staring at the tower as the screen gave three or four violent bursts of green fire and went dark.

The block tower fell with a crash.

Moments later Lessing was back in the observation room, leaving the children busily putting the tower back together. There was a little smile on his lips as he saw Melrose's face. "Perhaps you're beginning to see what I'm driving at," he said slowly.

"Yes," said Melrose. "I think I'm beginning to see." He scratched his jaw. "You think that it's adult psi-contact that drives the child's potential underground—that somehow adult contact acts like a damper, a sort of colossal candle-snuffer?"

"That's what I think," said Lessing.

"How do you know those children didn't make you take off your monitor?"

Lessing blinked. "Why should they?"

"Maybe they enjoy the crash when the blocks fall down."

"But that wouldn't make any difference, would it? The blocks still fall down."

Melrose paced down the narrow room. "This is very good," he said suddenly, his voice earnest. "You have fine facilities here, good workers. And in spite of my flippancy, Dr. Lessing, I have never imagined for a moment that you were not an acute observer and a careful, highly imaginative worker. But suppose

I told you, in perfect faith, that we have data that flatly contradicts everything you've told me today. Reproducible data, utterly incompatible with yours. What would you say to that?"

"I'd say you were wrong," said Lessing. "You couldn't have such data. According to the things I am certain are true, what you're saying is sheer nonsense."

"And you'd express that opinion in a professional meeting?"

"I would."

"And as an Authority on psionic behavior patterns," said Melrose slowly, "you would kill us then and there. You would strangle us professionally, discredit anything we did, cut us off cold." The tall man turned on him fiercely. "Are you blind, man? Can't you see what danger you're in? If you publish your book now, you will become an Authority in a field where the most devastating thing that could possibly happen would be—the appearance of an Authority."

Lessing and Dorffman rode back to the Hoffman Center in grim silence. At first Lessing pretended to work; finally he snapped off the tape recorder in disgust and stared out the shuttle-car window. Melrose had gone on to Idlewild to catch a jet back to Chicago. It was a relief to see him go, Lessing thought, and tried to force the thin, angry man firmly out of his mind. But somehow Melrose wouldn't force.

"Stop worrying about it," Dorffman urged. "He's a crackpot. He's crawled way out on a limb, and

now he's afraid your theory is going to cut it off under him. Well, that's his worry, not yours." Dorffman's face was intense. "Scientifically, you're on unshakeable ground. Every great researcher has people like Melrose sniping at him. You just have to throw them off and keep going."

Lessing shook his head. "Maybe. But this field of work is different from any other, Jack. It doesn't follow the rules. Maybe scientific grounds aren't right at all, in this case."

Dorffman snorted. "Surely there's nothing wrong with theorizing—"

"He wasn't objecting to the theory. He's afraid of what happens after the theory."

"So it seems. But why?"

"Have you ever considered what makes a man an Authority?"

"He knows more about his field than anybody else does."

"He *seems* to, you mean. And therefore, anything he says about it carries more weight than what anybody else says. Other workers follow his lead. He develops ideas, formulates theories—and then *defends them for all he's worth.*"

"But why shouldn't he?"

"Because a man can't fight for his life and reputation and still keep his objectivity," said Lessing. "And what if he just happens to be wrong? Once he's an Authority the question of what's right and what's wrong gets lost in the shuffle. It's *what he says* that counts."

"But we *know* you're right," Dorffman protested.

"Do we?"

"Of course we do! Look at our

work! Look at what we've seen on the Farm."

"Yes, I know." Lessing's voice was weary. "But first I think we'd better look at Tommy Gilman, and the quicker we look, the better—"

A nurse greeted them as they stepped off the elevator. "We called you at the Farm, but you'd already left. The boy—" She broke off helplessly. "He's sick, Doctor. He's sicker than we ever imagined."

"What happened?"

"Nothing exactly—happened. I don't quite know how to describe it." She hurried them down the corridor and opened a door into a large children's playroom. "See what you think."

The boy sat stolidly in the corner of the room. He looked up as they came in, but there was no flicker of recognition or pleasure on his pale face. The monitor helmet was still on his head. He just sat there, gripping a toy fire engine tightly in his hands.

Lessing crossed the room swiftly. "Tommy," he said.

The boy didn't even look at him. He stared stupidly at the fire engine.

"Tommy!" Lessing reached out for the toy. The boy drew back in terror, clutching it to his chest. "Go away," he choked. "Go away, go away—" When Lessing persisted the boy bent over swiftly and bit him hard on the hand.

Lessing sat down on the table. "Tommy, listen to me." His voice was gentle. "I won't try to take it again. I promise."

"Go away."

"Do you know who I am?"

Tommy's eyes shifted haltingly to Lessing's face. He nodded. "Go away."

"Why are you afraid, Tommy?"

"I hurt. My head hurts. I hurt all over. Go away."

"Why do you hurt?"

"I—can't get it—off," the boy said.

The monitor, Lessing thought suddenly. Something had suddenly gone horribly wrong—could the boy really be sensing the source of the trouble? Lessing felt a cold knot gather in the pit of his stomach. He knew what happened when adult psi-contact struck a psi-high youngster's mind. He had seen it a hundred times at the Farm. But even more—he had felt it in his own mind, bursting from the child. Like a violent physical blow, the hate and fear and suspicion and cruelty buried and repressed in the adult mind, crushing suddenly into the raw receptors of the child's mind like a smothering fog—it was a fearful thing. A healthy youngster could survive it, even though the scar remained. But this youngster was sick—

And yet *an animal instinctively seeks its own protection*. With trembling fingers Lessing reached out and opened the baffle-snap on the monitor. "Take it off, Tommy," he whispered.

The boy blinked in amazement, and pulled the grey helmet from his head. Lessing felt the familiar prickly feeling run down his scalp as the boy stared at him. He could feel deep in his own mind the cold chill of terror radiating from the boy. Then, suddenly, it began to fade.

A sense of warmth—peace and security and comfort—swept in as the fear faded from the boy's face.

The fire engine clattered to the floor.

THEY ANALYZED the tapes later, punching the data cards with greatest care, filing them through the machines for the basic processing and classification that all their data underwent. It was late that night when they had the report back in their hands.

Dorffman stared at it angrily. "It's obviously wrong," he grated. "It doesn't fit. Dave, it doesn't agree with *anything* we've observed before. There must be an error."

"Of course," said Lessing. "According to the theory. The theory says that adult psi-contact is deadly to the growing child. It smothers their potential through repeated contact until it dries up completely. We've proved that, haven't we? Time after time. Everything goes according to the theory—except Tommy. But Tommy's psi-potential was drying up there on the Farm, until the distortion was threatening the balance of his mind. Then he made an adult contact, and we saw how he bloomed." Lessing sank down to his desk wearily. "What are we going to do, Jack? Formulate a separate theory for Tommy?"

"Of course not," said Dorffman. "The instruments were wrong. Somehow we misread the data—"

"Didn't you see his *face*?" Lessing burst out. "Didn't you see how he *acted*?" What do you want with an instrument reading?" He shook

his head. "It's no good, Jack. Something different happened here, something we'd never counted on. It's something the theory just doesn't allow for."

They sat silently for a while. Then Dorffman said: "What are you going to do?"

"I don't know," said Lessing. "Maybe when we fell into this bramble bush we blinded ourselves with the urge to classify—to line everything up in neat rows like pins in a paper. Maybe we were so blind we missed the path altogether."

"But the book is due! The Conference speech—"

"I think we'll make some changes in the book," Lessing said slowly. "It'll be costly—but it might even be fun. It's a pretty dry, logical presentation of ideas, as it stands. Very austere and authoritarian. But a few revisions could change all that—" He rubbed his hands together thoughtfully. "How about it, Jack? Do we have nerve enough to be laughed at? Do you think we could stand a little discredit, making silly asses of ourselves? Because when I finish this book, we'll be laughed out of existence. There won't be any Authority in psionics for a while—and maybe that way one of the lads who's *really* sniffing out the trail will get somebody to listen to him!

"Get a pad, get a pencil! We've got work to do. And when we finish, I think we'll send a carbon copy out Chicago way. Might even persuade that puppy out there to come here and work for me—"

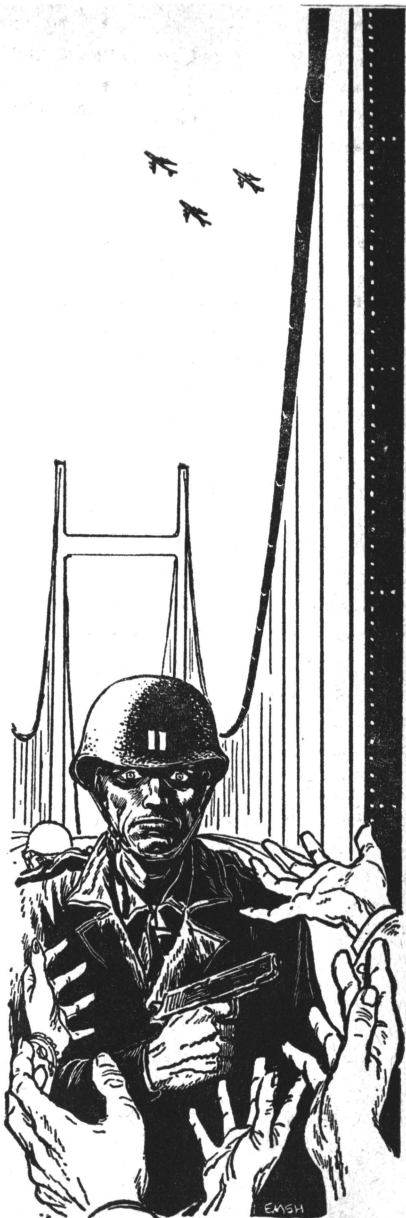
END

BY G. G. REVELLE

*His orders were final. And
how could these terrified souls
know their fate was his own?*

THE BRIDGE

TWO LOW flying interceptor jets screamed overhead, climbing for much needed altitude as they headed out to sea. The Captain took off his steel helmet and looked up at the thunderous roar just before he leaped from the still moving jeep. When his feet touched the ground he moved quickly, shouting orders at the olive-drab truck convoy he had been leading. He pointed his finger at the side of



Illustrated by Ed Emsh

the road where he wanted the small stuff. The "duce and a half's" he directed to the opposite side of the road. Then he put his helmet back on.

He watched as the troops quickly dismounted and assembled. He lighted a cigarette while he waited for his three officers. Only then did he look at the Bridge.

The massive steel structure spanning the river was six lanes wide, cantilever style with curved upper and lower cords. The Bridge looked trim and new. It was the Captain's responsibility to see that it stayed way.

He stuck the cigarette in his mouth and reached inside the rear of the jeep and checked his radio set. It was set on K channel, 29.2. He expected no messages, except in an emergency.

While he had the time he took a yellow sheet of paper out of his pocket and read the words pasted on it for the fourth time. Somehow they never changed; they always read the same. And each time he got a sinking sensation in his stomach when he read them.

Captain Alfred Lowary put the yellow paper away quickly when the three junior officers of the Battery reported. He returned their salutes in a lazy sort of way. He took off his helmet again.

"The orders are the same as briefing," he said. "Lieutenant Kastner will take the third platoon across the river to the West side. The second platoon, Lieutenant Tudor, will move North of the entrance on this side and take up position in reserve. Lieutenant Meyers

will set up defense on this side." He inhaled on the cigarette and looked at Tudor. "Place your machine guns carefully. I want a cross-fire on that slight bend on the road down there."

Tudor nodded.

The Captain pinpointed Meyers with his eyes. "You've got the 'hot-spot' . . . Just remember . . . No one gets on the Bridge!"

"But—" Meyers began.

"No buts. I said no one. Understand?"

Meyers' "Yes, sir," was barely audible.

"Any questions?" the Captain asked.

They shook their heads negative, except Meyers. He said, "Just one thing, Captain."

"What's that, Lieutenant?" Lowary asked.

"Are we supposed to shoot our own people?"

Lowary's face grew hard. "If we have to, Lieutenant," he said. "If we have to." The tone of his voice told them that he wanted to avoid any discussion on the subject.

There was silence. Finally Lowary said, "That's it, then. Let's move."

The Officers saluted and began to move off. Tudor took two steps, then halted and returned. "How much time do you think is left, Captain?" he asked.

Lowary took in the man's square face, the set of his jaw. Tudor was ex-combat, infantry during the last war.

"Who knows, Lieutenant! Minutes . . . or hours. It all depends on how strong the enemy is, how fast

they're moving, if they are sending a boy to do a man's job."

Tudor looked down the river in the direction of the City some thirty miles away. He seemed to have difficulty finding words. Lowary knew what he was thinking and it made him feel weak and inadequate.

Lowary said softly, "We knew it would come some day, didn't we, Tudor?"

Tudor faced him. "I guess we did . . ." he hesitated.

"Well?"

"I just didn't think I would draw this kind of duty. I don't mind fighting, I've had my share. But I guess I feel as Meyers does. This will be something new for me, shooting my own people."

"Perhaps we won't have to," Tudor said.

Tudor stepped back a pace and gave him a salute. "You don't believe that any more than I do, Captain." He began to walk away swiftly.

Lowary watched him go and he wondered how many men in the Battery were thinking the same thing? It could create a serious psychological block. Damn it. It was bothering him too. But he could do it if he had to. He knew he could.

He climbed into his jeep and adjusted the radio squelch button, cutting down on the steady crackling noise. He found himself repeating under his breath. *I can do it because I know I have to. I can do it because . . .* He jammed down on the starter and shoved the gearshift into first. He had to force the thoughts from his mind. He had

orders to follow; orders left no room for personal feelings. Yet he knew the yellow paper in his pocket was mocking him.

The jeep was opposite the bridge entrance when he halted it momentarily. Lieutenant Meyers was busy talking to a machine-gunner named Morgan. As Lowary recalled, from what little he had seen during the three weeks he had been commanding the outfit since his transfer from the middle west, Morgan was a conscientious type of soldier. Meyers was making a good choice for such a delicate position. He moved on.

The tires made a low singing sound when he rolled on the bridge, heavy tread pounding on steel grating.

A sign attached to an upright girder caught his eye. He smiled sardonically and he wondered what the author had in mind when he phrased it.

It said: IN EVENT OF AIR ATTACK—DRIVE OFF THE BRIDGE.

The Captain shook his head.

When he got to the center of the bridge he halted the jeep. He got out and crossed over the lanes to the south railing and looked down at the gray water. It looks muddy, he thought. A wide, muddy snake winding its way down to the City. He looked at the horizon. He couldn't see the City but he knew it was there. He wondered for how long!

It will light up like a torch, he thought. One huge sheet of red and orange flame a mile high, like the

gates of hell swinging open. Then there would be nothing but a towering mushroom of black smoke to mark the spot of the largest City in the world.

He found his hand clutching something in his pocket. He took it out and looked at it. Then, bitterly, he put it away. It was the yellow sheet of paper again. To read it would be torture.

Lowary ran the zipper up on his loose fitting green field jacket as a sudden chill took him. He blamed it on the nonexistent wind as he lighted another cigarette.

The sound of a motor caused him to look up. He narrowed his eyes, looking at the far end of the bridge. It was Lieutenant Kastner; he could tell by the foot resting carelessly on the outside fender. Kastner drove as though he were resting in an easy chair with his feet nestled on a hassock.

Kastner swung out of the jeep loosely, with the grace of a well-coordinated athlete. A wide grin split his face.

"Just on my way to report to you, Captain. Everything is set up on my side."

Lowary smiled. He had been on his way to check Kastner. Lowary took in the blond man's well-proportioned body. Kastner looked like the recruit ad on a "wild-blue-yonder" poster.

Kastner's eyes left Lowary's face. The Captain followed the other's gaze upward. Two long, white vapor trails were cutting across the blue sky.

"They're ours," Kastner said. "They're heading North by East,

toward the ocean." He looked at Lowary. "Maybe they can stop it before it starts!"

"Maybe," the Captain said softly. In his heart he knew it was only a faint hope. The Air Force never tried to conceal the fact that some of the enemy could be expected to sneak through in the event of attack.

"I don't think we'll have much trouble at our end of the bridge, Captain. I don't think anyone will be fighting to go in that direction," he nodded down the river, in the direction of the City.

"I guess not," Lowary said absently.

"This waiting can be murder," Kastner said. "It just doesn't seem right, waiting to be clobbered. Sitting here until they drop one down our throats before we can fight back."

Lowary smiled bitterly. "It's always been that way, Kastner. I suppose it always will be." Lowary squashed the cigarette butt with his heel.

"How's Meyers taking all this?" Kastner asked. Lowary raised his eyebrows. "His sister works in the City," Kastner went on. "They're pretty close."

"I didn't know," Lowary replied. He thought, perhaps I should change assignments. Kastner wouldn't picture every woman who might try to break through as his sister. It would make it easier on Meyers.

"You're from Dakota, aren't you, Captain?"

"I was stationed there for three years before this assignment. This

is my first trip East."

"Married?"

"Wife . . . son and daughter. The girl is eight, the boy twelve." The picture of blond, thin, lovable little Susan came to his mind. And Ronnie, with the freshly found sense of humor, who wanted to be a writer when he grew up . . . if he grew up. He hadn't seen them or Dot since the transfer came unexpectedly. He missed them, badly. He hadn't realized how much until just this minute.

"Did you bring your family with you?" Kastner asked.

Lowary shook his head. "No. Dot stayed behind to sell some of the furniture, and to let the children finish school. It's no good changing schools in the middle of a semester."

"I guess it isn't. I wouldn't know though. I'm single."

The sound of rubber pounding on the steel grating caused them both to turn. The Captain expected to see an Army 2½ ton truck. The truck wasn't olive-drab, it was white. BAKERY was stenciled on the side of the closed cabin in red letters.

Kastner moved to the opposite lane on a fast run. He waved his arms. "What are you doing on the bridge?" he shouted. "It's closed to civilians."

The driver stuck his balding head out of the window. His face was dirty and tired. "The Lieutenant back there said it was O.K." He looked at Lowary. "I'm only going to Kingston, Captain."

Lowary turned to Kastner. "Check this guy. I'll be back." He

jumped into his jeep and wheeled it around. This time he kept the accelerator to the floor. Meyers was a fool!

He found the tall, thin officer leaning on the rail, looking down the river toward the City. He leaped from the jeep, reached Meyers with two strides.

"If you have to do that, Lieutenant, do it where the troops can't see you. It's bad for morale," he said bitterly.

Meyers spun around quickly.

"You had orders to keep this bridge closed, Lieutenant. Why didn't you?"

Meyers opened his mouth, then shut it without saying a word. "Speak up," Lowary raised his voice. Meyers' eyes met his. "You wouldn't understand, Captain," Meyers said evenly.

"Try me," Lowary fought to keep his voice down.

"You seem to forget that these are our people . . . not the enemy. He was just a poor working slob who wanted to get home to be with his wife and kids. To him it might be his last day on earth. Who are we to deny that?"

Lowary said nothing.

Meyers said, "You're not worrying, your family is safe out in the Middle West. We know people around here. They aren't just shadows. We should be helping them."

The Captain took off his helmet. He reached for another cigarette. Finally he said, "Do you realize how important this bridge is if there is an attack? It connects one of the routes designated for the relief of the City if it is hit. You were

too young for the last war so you probably don't realize what happens when wanderers, escapees hit the road. They can tie it up like a knot so that no one moves. They have other routes they can use. This one is closed. We've got to keep it for emergency use."

"What's one truck?" Meyers said.

"One truck, loaded with explosives could park in the middle of this huge erector set and blow it sky high. All the Reds aren't in those planes the Coastal Defense sighted. We have some right here, waiting."

"But he wasn't a Red. He lives in Kingston!" Meyers protested.

"How do you know?" Lowary said simply. He didn't wait for Meyers' answer, he turned and began to walk away.

"Captain!"

Lowary turned at the sound of Tudor's heavy voice. The stocky officer was waving at him from up the road, pumping his arm with clenched fist up and down, the signal for double time. Lowary took off on the run. He could hear Meyers' feet pounding behind him.

Tudor was standing beside a young corporal looking down the steep, rocky embankment at one of the concrete piers supporting the bridge. A small figure was making its way toward it.

"It looks like one of our boy's decided to go over the hill," Tudor said tersely.

Lowary faced the young corporal. "Unslung that rifle, son, and see if you can pick him off."

Lowary felt Tudor's hand on his arm. "There's no need for that,

Captain. I'll send a squad down to pick him up."

Lowary glanced down at the hand. Tudor removed it. He spoke directly to the corporal, "I said see if you can pick him off!" The soldier hesitated. Lowary knew why. The figure down there was in uniform, probably a friend.

The Captain snatched the rifle from the corporal's frozen fingers. He slapped the stock against his own shoulder.

"He's probably just a scared, bewildered kid," Meyers cut in quickly.

"If I'm wrong, I'll apologize," Lowary said as he sighted down the barrel. He planted his feet firmly and squeezed. The stock slammed him in the shoulder. He cursed, then he squeezed again. This time he remembered to hold his breath. The figure slumped, fell off the concrete, into the water.

Lowary juggled the gun once by its balance, then he handed it back to the corporal who was staring dully at the small figure floating and bobbing in the water. "You can send that squad down to get him now, if you want, Lieutenant Tudor," he said before he turned away.

HE WALKED slowly. He could have explained, but there wasn't time. Decisions had to be made quickly, right or wrong. Perhaps the kid down there *was* afraid, just running away. But he couldn't take that chance. There was no reason to believe that the military didn't have some subversive ele-

ments within; the Reds had infiltrated everywhere else. And what better time for the rats to come out of their nests, then now, when the country was on their target list! One man could be as dangerous as a Red Division.

Lowary climbed into his jeep conscious of how tired he felt. I'm getting old, he thought. He leaned back and took off his helmet and looked up at the clear blue sky, letting the breeze fan his face. A high, distant speck caught his eye. It was trailed by a four-forked stream of white. He felt his stomach grow cold, as he stared in fascination at the four vapor streams that could only be one thing; a multi-engine bomber. It was coming in from the Northwest, heading for the City. The enemy had slipped one through the defense.

He tore his eyes from the sky. Perhaps no one else had seen it. It would be better if they never did.

And so it comes, he thought. The end of an age . . . back to the sticks and stones for good. He drew in on a new cigarette, thinking of Dorothy and Susan and Ronnie. He became conscious of Meyers standing beside him. He wished he would go away, there was so little time left to daydream. He wanted to be alone.

"The guard down the road says there is a pile-up of civilian cars that demand to go across."

Lowary looked up. "Send some of the reserve platoon down and forcè them back. You know the orders!"

"Look, Captain. We've got maybe ten . . . fifteen minutes left.

What harm will it do?"

Lowary felt weary. Meyers hadn't failed to see the bomber, neither had the people in the cars. They knew it was the beginning of the end. Meyers and Tudor, and the others were wearing him down. He felt like giving them their damn bridge. It would be easy, so final.

He took the yellow paper out of his pocket and glanced at the pasted letters again. When he was finished he knew what he had to do. He had no choice.

Lowary handed the paper to Meyers. "I'll take care of things down the road. Perhaps you might like to read this while I'm gone," he said. The Lieutenant looked puzzled when Lowary drove away.

The traffic was jammed just as Meyers said it was. The Sergeant in command of the squad had set up a small road block. A machine-gunner, Morgan, was sitting behind a .50 Cal. looking down the barrel. Lowary drove past them, up to the lead car.

As he threw his legs out over the side of the jeep he looked up quickly. The single multi-engine bomber was overhead, still heading South. In the distance he could see new vapor streams, much smaller, much faster. The Interceptor Command was giving chase. Lowary could see that they would be too late to save the City.

"Please let us through, Captain!" a woman near him asked. She was slender, she had been crying.

Lowary felt so helpless. He said, "There is nothing I can do. This bridge must be kept open for relief

purposes. It is out of my hands."

"You're a murderer. You're keeping us here to be killed."

"There were other routes open. You should have taken—" The woman flung herself at him, beating at his chest with her thin hands. "I want to go home," she screamed.

Lowary took her by the wrists and held her off gently. God give me strength, he prayed. It would be so easy to let her through, along with the others. They would be safe, perhaps. But he would be running the risk of losing the bridge. Everyone in the City wouldn't die, some would survive the hell blast. They would need medical attention, supplies, food and water. They deserved that chance.

A man's heavy voice carried above the shouts. "We can get through if we all try it at the same time. He can't shoot us . . . he's in the line of fire."

Lowary hadn't realized it, but it was true. The machine-gunners were sighting down his back. He shouted above the rising din, "It makes no difference, they'll shoot if they have to."

"It's a lie," a woman shouted. Lowary heard the whine of a powerful motor start up. "Well, I'm for giving it a try," he heard someone far back say.

Lowary turned and faced the gunners. He could see Morgan's strained face. The kid looked so young, yet he was the only one Lowary felt he could depend on. "If anything moves down here I want you to open fire," he called to Morgan. "Understand?"

Morgan's helmet nodded slowly.

Lowary turned around. The woman seemed undecided. Lowary spoke softly. "Why don't you get down off the road, into that gully? You'll be safe there."

The woman's mouth worked up and down but no words came out. Her face was white and haggard.

The radio in Lowary's jeep began a familiar crackling sound as someone on the same frequency pressed a button on a handset.

Lowary was afraid to move. He could easily start a stampede if the civilians thought he was making the move just to get out of the line of sight of the machine gunners. Slowly, he raised his hand until it was near the .45 resting in the holster clipped to his web belt.

He waited.

"LARGO ONE—THIS IS LARGO NINE—OVER."

Lowary edged backwards, still facing the crowd. The woman was crying now. Down the line of cars he could hear the high powered motor being gunned as it was being maneuvered out of the line. Soon it would make the attempt of running down Morgan and the others. It wouldn't stand a chance, but the others might succeed in the confusion that would follow.

He made the decision then. Deliberately, he turned his back on the crowd and walked to the jeep.

"Don't let him turn on that radio," a man's voice called. "He will warn the rest of the troops to be waiting for us."

Lowary picked up the hand-mike. "This is Largo One," he said.

"THIS IS LARGO NINE," the

(Continued on page 120)

*In youth Lauria was beautiful,
proud, unattainable. But when
autumn came, she changed her
code and lowered her defense.*

LAURIA SWEEPED down the spiral staircase in regal dignity, and wished there were someone there to witness her entrance. She walked across the parlor to the gun-rack and strapped a holstered pistol to her hip, just above the rustling flare of the full skirt of her evening dress.

The green sun's slanting rays in the parlor window told her it was late afternoon, nearly time to get started. She went to the full-length mirror. Beside the mirror hung the framed copy of the Constitution of Pamplin, hand-lettered on parchment. In bold red letters it proclaimed:

We, the people of Pamplin, hold that:

1. No government is the best government.

THE LAST BRAVE INVADER

BY
CHARLES L. FONTENAY

2. A man's home is his castle.

3. A woman's rights are equal to a man's rights.

4. Only the brave deserve the fair.

Lauria looked in the mirror, almost fearfully.

She saw with approval the breadth of her hips, the erectness of her shoulders. With more reluctance, her eyes rose to her face. There was still beauty there, she told herself, to the discerning eye. That touch of slackness to the jaw, that faint hollowness of cheek: those were no doubt exaggerated

by the dimness of the room.

In a table drawer, Lauria found jars and tubes. From them she carefully filled in a fuller form for her mouth, dabbed heavily at her cheeks, touched up her eyes, smeared over her jawline. She fluffed out the thinning blond hair and donned a light scarf then she removed the heavy bars from the front door. She went out, and locked its triple locks behind her. She gazed around cautiously and stepped lightly down the gravelled path. Around the house, the grounds were a solid mass of blooming flowers. Lauria had plenty of time to spend in the garden. The baskets and other handicraft articles that were her means of income left her a good deal of leisure, and cooking and household chores were routine and brief.

Farther from the house, the grounds looked better kept than they were. It was fortunate that the blue grass of the planet Pamplin grew short and neat, for Lauria never would have been able to keep the ten acres of her property trimmed. But the big trees that shaded the grounds had dropped twigs and leaves that she wouldn't clear away until the big effort of the fall clean-up.

The path curved down past a small cleared area in which a dozen upright wooden markers were spaced in rows. This was the cemetery.

She paused to look out across the neat rows of markers. There were men buried there. Twelve young men. They had died by her

hand, in accordance with the Constitution and the law.

At one end of the cemetery stood a large wooden plaque on which she had carved the Constitution of Pamplin. Many times had her mother explained the meaning of the Constitution to Lauria, when Lauria was a little girl and still intruding on her mother's privacy.

"The people who colonized Pamplin left Earth many years ago because there they always had to sacrifice some of their individual rights to some government," her mother had said. "There are many kinds of governments, but all of them try to regulate people. And to regulate people, they have to invade people's privacy.

"The people of Pamplin came to this world because we don't want any government. We believe that every man and woman should have his individual right to do as he pleases, without other people bothering him."

"But what does No. 4 mean, Mother?" Lauria had asked.

"*Only the brave deserve the fair?*"

"That means," replied her mother, for Lauria was fourteen and deserved to know these things, "that a woman on Pamplin is not subservient to the whims of men. No man may approach her and take her in his arms unless he has fought his way through the defenses of her home. Then they may agree to share the home, if they wish, but no woman of any character will permit a man to do this until he has proved his valor by fighting his way to her."

"Then my father must have been a brave man, wasn't he, Mother?"

"Yes, he was, my dear," said her mother, smiling tenderly. "He was very persuasive, too."

Lauria never saw her father, and no other man invaded the privacy of her mother's home while she lived there. Two men tried, and Lauria remembered the tense stirrings about the darkened house in the dead of night, the flash and roar of the guns, and her frightened glimpses of the men her mother had shot down as they tried to break in.

Her father must have been very courageous, Lauria thought. She constructed a handsome picture of her father in her mind, and dreamed of the day a handsome man like he would conquer her, when she lived in her own home.

Lauria's mother had some property on which she wanted Lauria to build a house, but Lauria was impatient. Even though her mother would hire men from town, Lauria would have to do much of the work herself and it would take years. So at sixteen, Lauria got her a house, ready-built.

She crept past the defenses of one of the best homes in the area. She broke into the house at night and killed the defender, a tired old man, in a blazing gun battle. The house became her home, and she improved its defenses.

Her ownership of the house, and her manner of taking it, gave her an immediate social standing far above that of her mother. She knew that she was envied: the bright-haired, beautiful young

woman who held the ramparts of the big house and challenged all comers to conquer her.

There were men who tried, and the first nearly succeeded. Even now, after many years, she could remember Poll's youthful, arrogant face, his lazy smile. They had met in the market place.

"An attractive spitfire, if ever I saw one," he had said to her. "Would you surrender to my arms, pretty one?"

"If you're strong enough to come and take me," she challenged, fire singing in her blood.

And that night he had come. In the starlight she fired from her windows at the shadowy figure that flitted among the bushes and trees, and powder smoke hung heavy in the air. It was after several hours and a long silence, when she thought he had given up and gone away, that he almost surprised her.

She was crouching in the parlour, waiting for the dawn, when there was a slight noise behind her. She whirled, whipping up her gun, and he was coming toward her swiftly and silently from the hall, a smile of triumph on his handsome face.

He was holding out his arms for her and there was no weapon in his hand when she shot him down.

She wept for a long time over his fair body, and knew to her shame that she had wanted him to conquer. Then she took him out and buried him beneath the grass. His grave was the first one, and behind it later she erected the wooden plaque bearing the words of the Constitution of Pamplin.

Others had tried, and their graves were here, with Poll's. And the years had passed, and no man had overrun the defenses of Lauria's house.

The frost of autumn was in her veins now as she looked at the graves of twelve young men, who had been young and eager in the years when she had been young. Slowly she turned away, went out the barred front gate of her property and waited for the crowd of merrymakers she would accompany to the party in town.

The music reverberated gaily amid the rafters of the huge community hall. At one end a fire blazed merrily in a big fireplace. Young couples, and their elders, danced variations of the steps that had been brought from Earth generations ago.

No one wore weapons here, although every person in the hall had worn or carried a gun on the way here. The guns were checked at the entrance, and the doors were barred against any lawless raider.

Here, as in the market daily, people congregated. Here they were people and not individuals.

Outside, between here and their homes, they were individuals again, but still friendly, if wary. They carried their arms, they were careful of their language, they watched the people around them for signs of aggression. Outside was a code of conduct that was different from the sociable code inside, a code that condoned a duel over an insult, that recognized robbery, rape and even death if one were

caught unarmed and alone.

And in their homes . . . well, there was Cholli Rikkard. He was one-armed because of a wound he had suffered conquering Fanni in her home. Cholli had been a gay fellow who had stormed house after house of pretty women before, but after that he settled down with Fanni and they now had five children. They shared their privacy, but half a dozen times Cholli had stayed up all night fighting off those who would invade it.

The strange thing was that one or more of those who had sought to invade Cholli's home and take his wife and house from him might be dancing here tonight, perhaps chatting amiably with Cholli. Cholli might even know them for the attackers. Here they were all friends, suspending their cherished privacy for weekly companionship.

Lauria was one of those who sat among the oldest, and talked unhappily with those on either side of her. It was not that she was that old, for she wasn't. It was that Lauria's home now had the reputation of a deadly, unassailable fortress, and few men cared even to dance with her. It was that they feared her, she told herself as she sat there after only two dances.

"Care to dance this one, Miss Lauria?"

She looked up, startled. It was Cholli Rikkard, smiling at her, holding out his one arm apologetically.

She arose, gratefully, and took his hand. She and Cholli were old friends. Perhaps it was the sympathy of the handicapped for the

handicapped: the man with only one arm for the woman with (perhaps?) too much stern pride.

"Tell me something, Cholli," said Lauria as they danced. "Is it true that many women deliberately allow men to invade their privacy?"

He looked at her blandly.

"That would be a violation of the Constitution, Lauria," he said.

"I know it would," she said impatiently. "But do they?"

"I've heard rumours."

"I've heard rumours, too, but I want the truth. You know the truth, Cholli. You conquered quite a few women before Fanni shot you in the arm."

He grinned.

"Fanni always was a poor shot," he said. "Or maybe she's a better shot than I think. Yes, Lauria, it's true. The Constitution is the law, and it's right in principle, but you have to face facts. If men and women adhered to the letter of the law in . . . well, sex . . . Pamplin would be depopulated by now. I thought everybody knew that."

"I didn't," said Lauria miserably. "I suspected . . . I'd heard a lot of talk. But . . . well, tell me, Cholli, how is it done? How do men know, I mean, when a woman is going to wink at the Constitution and let a man enter her home without fighting his way in?"

"It depends, Lauria. I suppose most often a woman has an understanding with a certain man and he gives some sort of signal when he comes to her house, so he won't be shot. Some women—quite a few, it is—just sort of let it be known around that they won't shoot if a

man comes around. That's more dangerous, though, and they have to be on guard."

"I'd think so," said Lauria indignantly. "Another woman could take advantage of something like that and make a good haul."

There was a silence. Then Cholli said slyly:

"Did you want to get a message to some man—or get the word around that . . . ?"

"Certainly not!" she retorted firmly. "I abide by the Constitution, and I value my privacy."

"Okay, Lauria. I just thought I could get the word passed for you." He grinned. "If it weren't for this bum arm, I might have tried for you myself before now."

The music stopped and they parted.

"Wait, Cholli!" cried Lauria in a low intense voice. He turned and came back to her, looking at her quizzically.

"Cholli," she said, almost in a whisper, "pass the word around tonight that no young man will find my home defended!"

She turned her back quickly, her face flaming, and left the hall, picking up her scarf and gun at the door. She walked home alone, swiftly, holding up the hem of her skirt with her left hand and hoping savagely that someone would try to waylay her.

IT WAS MIDNIGHT when the alarm bell sounded.

Lauria had been sitting in the parlor, with no light but that of the fire, a hot drink in her hand,

lost in turbulent thoughts.

Her thoughts twisted slightly. Had she made it plain to Cholli that only young men would be welcome?

But how could she toss aside everything in which she had believed for so long, on an impulse? Would she not redeem herself by shooting down any invader?

Shame was upon her now, for having told Cholli what she did. It was not the perverse shame that had run hot in her that night when she had fought Poll and wanted to be defeated, but the shame of having done what she scorned other women for doing.

But Lauria was lonely now, and the fire was not as warm as it once had been. How many years had it been—ten? fifteen?—since the last young man had won her outer wall, only to fall beneath her bullets in the moon-shadows?

Could she turn now to the ways of other women, to dissemble, to shoot wide of the mark and put up a false defense? Could she now betray the weapons that had served her so well and true?

Or would there be a thirteenth grave in the little cemetery on the morrow?

The bell chattered nervously.

She arose and threw ashes on the fire. A weariness was in her bones. She took a gun from the rack and made the rounds of the house, checking the locks of doors and windows.

All was secure. More lithely, like a pantheress, she went from window to window, looking out, her gun ready. Some of the old wine of

battle quickened in her blood.

The moon was bright, and the trees stood in great pools of shadow on the grounds. The bushes stood like dark, bulky sentinels.

At last she saw him, a moving shadow against the still shadows, creeping closer to the house. Her gun came up and she took aim, carefully, through the barred window. Her hands were as cold as ice on the gunstock.

For a moment he was still, and she lost him against the shadows. Then he moved again.

Her gun blossomed roaring flame and its stock kicked against her shoulder.

The shadow leaped, became a man as it fled across a path of moonlight. He was young, and he was smiling toward the window. Then he was swallowed up in the deeper shadows.

For a moment she was aghast, unbelieving. She had missed! Then, like a frigid hand clutching her heart, came the realization: deliberately, without conscious volition, she had pulled the gun muzzle aside when she fired.

She leaned against the wall, weak and perspiring. It was true, then. She yearned so deeply for a man, she so feared the age that crept up on her, that the principles of the Constitution no longer held real meaning for her.

She did not seek to fire again. She knelt on the floor by the window and waited, looking listlessly into the embers of the fire across the room. She felt suspended in a nightmare.

(Continued on page 120)

WANTED IN SURGERY

(Continued from page 80)

defense . . . he did not need that. But the story, and the real story. It was difficult not to fall into bathos or melodrama. It was even harder to keep from lashing out insanely at the machines.

Once, a snicker started up from the audience, but the others scathed the laughter to silence with vicious stares. After that, they listened . . .

The years of study.

The death of Kohlbenschlagg.

The day of the Operation.

Calkins and his approach to medicine.

The sight of metal-sided invaders in the physician's domain.

The fear of the people, their hatred of the machines.

Charlie Kickback's woman, and her terrors.

When he finally came to the story of the thresher amputee, and the calm workings of the phymech as his patient died, the eyes turned from Bergman. They turned to the silent cubicle where the jurymech lay inactive.

Many began to wonder how smart it would be to select the robot. Many wondered how smart they had been to put their faith in machines. Bergman was playing them, he knew he was, and felt a slight qualm about it—but there was more involved here than merely saving his license. Life was at stake.

As he talked, calmly and softly, they watched him, and watched Calkins, and the jurymech.

And when he had finished, there

was silence for a long, long time. Even after the jurybox had sunk into the floor, as deliberations were made, there was silence. People sat and thought, and even the newsfax men took their time about getting to the vidders, to vid in their stories.

When the jurybox rose up out of the floor, they said they must have more deliberation.

Bergman was remanded to custody, placed in a cell to wait. *Something* was going to happen.

Murray Thomas was ushered into the cell, and he held Bergman's hand far longer than was necessary for mere greeting.

His face was solemn when he said, "You've won, Stu."

Bergman felt a great wave of relief and peace settle through him. He had suspected he would; the situation could be verified, and if they checked for what he had pointed out, avoided blind faith in the machine, they would uncover the truth . . . it must have happened before, many times.

Thomas continued, "The news sheets are full of it, Stu. Biggest thing since total automation. People are scared, Stu, but they're scared the right way. There aren't any big smash-sessions, but people are considering their position and the relation of the robot to them.

"There's a big movement afoot for a return to human domination. I—I hate to admit it, Stu . . . but I think you were right all along. I wanted to settle back too easily. It took guts, Stu. A lot of guts. I'm afraid I'd have sent that woman away, not gone to tend her man."

Bergman waved away his words. He sat staring at his hands, trying to find a place for himself in the sudden rationale that had swept over his world.

Thomas finished, "They've got Calkins up for investigation. Seems there was some sort of collusion between him and the manufacturers of the phymechs. That was why they were put in so quickly, before they'd been fully tested. But they called in the man from the Andrei Company, and he had to testify they couldn't build in a bedside manner . . . too nebulous a concept, or something.

"I've been restored to full status as a surgeon, Stu. They're looking for a suitable reward for you."

Stuart Bergman was not listening. He was remembering a man twisted in death—who need not have died—and a blue-eyed girl

who had lived, and an amputee who had screamed his life away. He thought of it all, and of what had happened, and he knew deep within himself that it was going to be all right now. It wasn't just *his* victory . . . it was the victory of Man. A Man who had stopped himself on the way to dependence and decadence, and had reversed a terrible trend.

The machines would not be put away entirely.

They would work along with Man, and that was as it should have been, for the machines were tools, like any other tools. But Man was the factor now, again.

Bergman settled back against the cell wall, and closed his eyes. He breathed deeply, and smiled to himself.

Reward?

He had his reward.

E N D

THE BIRDS AND THE BEES

(Continued from page 87)

and would not raise them. Xeon held his arm about her shoulders, as if to protect her, but I know not from whom.

"Sias," he said. Then stopped, embarrassed.

I waited, and Rocsales was silent, and he continued.

"Sias, we come to tell . . . We will . . ." He raised his eyes to mine and said manfully, "We shall try again."

I am afraid that tears came to my eyes. Such sacrifice—

"We beg one favor," Xeon went

on. "We are agreed that—Well, we should like to be left alone, in private, to try."

"Of course," I replied. Anything they might want they could have. My relief and gratitude must have showed, for Xeon took a deep breath and spoke again.

"We do not deserve praise, Sias," he said. "The truth is, we . . . we sort of enjoy it."

I watched them turn and wander off together under the stars.

My heart has a warmth in it, and I no longer fear for the future of our race when our young people can show such nobility and sacrifice.

E N D



That trip abroad may some day be made aboard a submarine. Nuclear development, gas turbines and hydrogen peroxide used as fuel have added up to a possible means of shipping that may be speedier than surface boats and surer than air traffic. What makes submarine transportation so alluring is the fact that it rarely, if ever, is affected by the weather. Unlike other modes of travel, a sub could adhere to a very tight schedule mindless of typhoons, storm warnings, snow, icebergs and other hazards.

A seven-pound rifle that throws out lead at the rate of 750 shots per minute may become the basic U.S. infantry weapon. The new weapon is called Armalite by its developer, the Fairchild Engine and Airplane Corporation, and is the first such weapon to be produced by American industry in more than a decade. Currently undergoing exhaustive tests, the lightweight, fast-firing rifle shows promise of replacing four weapons at once: the Browning Automatic, carbine, sub-machine gun, and .45 caliber pistol. The new rifle emphasizes strictly functional approach, light in weight and mechanical and manufacturing sim-

plicity. It can be fired single-shot or full automatic, from shoulder or bipod. It is 40 inches long, including recoil compensator, weighs seven pounds. It takes rounds from an aluminum magazine that holds 20 short .30 caliber bullets. On full automatic, the 20-round clip can be emptied in 1.65 seconds. Gas operated, the Armalite is so designed that when it is loaded and locked the action is entirely closed against sand, dust, mud, rain and snow.

A nylon artery, shaped like a "Y", is proving to be a life prolonger for the future. The man-made artery is designed to replace tired, clogged or diseased arteries in the pelvic region or as a replacement for the human aorta. Called an "aortic bifurcation" graft, the nylon replacement opens up new areas of surgery; permits "spare" artery stocks and can be used by military surgeons in field hospitals.

Latest thing for homes of the future is a photo-electronic light switch. This is a light-sensitive mechanism that turns lights on when it grows dark outside, and off when it becomes light again. Unlike clock-type switches, this gadget switches lights on at a different time each night. Simple to use too. Just plug the light to be controlled into a special plug, face the "eye" of the gadget toward the window, connect to any 110 volt 60 cycle outlet. Never needs setting or adjustment.

People who live in glass houses have a better chance of staying alive dur-

ing an atomic attack. Particularly if the glass house is buried in the back yard. Researchers think that a preformed fiberglass shell, which can be buried adjacent to a house, would provide people with a cheap, comfortable shelter offering protection against blast, radioactivity and fires. The shelter measures 12 feet, eight inches high, four and one-half feet in diameter, with walls one-quarter inch thick. It sleeps four, has provisions for food, water and blankets. Air conditioning is provided by hand-operated bellows.

Harmful sludging of engines, most severe under today's "stop-and-go" driving conditions, may soon be eliminated by a new motor oil additive being introduced by the DuPont company. The new detergent will prevent sludge deposits at both high and low temperature driving. It is also unique because it works in the presence of water—and water is the foremost reason for sludge formation. The new product surrounds each individual particle of sludge in a chemical raincoat of its own. The packaged particles cannot join forces and settle, but remain suspended in oil. So small they are invisible, they easily pass through the oil screen and filter and are drained off when the oil is changed.

Daily predictions of the position of the "jet stream", fast moving current of air in the upper atmosphere, may soon become routine weather service. The core of this high, fast moving wind tunnel has been lo-

cated and plotted on maps for the entire United States. Knowledge of the jet stream is becoming more and more important as more jet aircraft are coming into commercial and military use. Pilots use it for an added "lift" when headed eastward, and try to avoid bucking its winds at other times. Exact knowledge of its height and location for a given area and time will be an immeasurable aid to tight schedules.

An atomic tire, vulcanized by nuclear radiation, has been made by scientists of the B. F. Goodrich company. This is the first time atomic energy has been used to treat rubber. The vulcanization was accomplished without use of heat, sulfur or other chemicals and resulted in a direct linkage of the carbon atom chains of the rubber molecules. The tire, in a steel mold, was vulcanized by rotating it slowly over radioactive fuel elements taken from a nuclear reactor. Scientists predict that this "cold" method could be a vital element in the speeding of production.

Boron, found in borax and boric acid, may soon become the parent of a new family of important compounds. Most provocative is the potential use of boron-hydrogen compounds as high-energy fuel. Pentobrane, for example, releases twice the energy of conventional hydrocarbon fuels on a pound for pound basis. Consequently, it might serve excellently in rocket or jet motors in missiles and supersonic aircraft.

Thue AND Cry

Marcia Burt's letter in the latest *IF* evokes much sympathy from me—who at 50, am a confirmed science fiction and fantasy reader in spite of (because of, too) my friend's remarks. I was brought up on fairy tales, myths, ghost stories—and with every encouragement to seek out the imaginative wherever it might be—Jules Verne, Poe, Edgar Rice Burroughs, Talbot Mundy, H. G. Wells and LaFanu.

When my daughter began her career of avid reading, I bought her science fiction. It seemed to me that even the poorest story had at least an *idea*; the young mind could stretch given an idea. Space opera or gadget story, witch's brew or fairy drink, here was the field of writing most likely to encourage her imagination, her curiosity. Her brothers followed right along, to the profit of each mind. So, in defense

of science fiction, I say it is one of the mind stretching crafts and to be valued for that reason if no other. All reading is escape. Even the textbook allows the student to escape from his immediate world into a hoped-for world. Science fiction encourages curiosity, a resilience and balance of mind so essential in our present society. More and more science fiction is providing insight into human relations. And the "trashiest" piece of science fiction has more value than the comic book, the "true" love story, the Hollywood glamour fog that too many people mistake for reality.

—Grace Warren
Danville, Cal.

You printed a letter from Miss Burt who said she had a problem concerning the accusation of the use of science fiction as an escape mechanism. Actually science fiction, like any novel, is an escape to a certain extent. But as most novels don't do, science fiction broadens your mind in that it covers many areas. Science fiction has led me into many sidelights, among them semantics, which is my present interest. I am but a year older than Miss Burt, in the eleventh grade, but I don't run across the accusation. In fact some people who start to criticize end up becoming interested themselves. After all T.V. is an escape. So is baseball (and look at all the people interested in *that* form of escape). Everyone has his own form of escaping and I guess it's pretty hard to see another fellow's point of view when your own is completely different from

his. I don't suppose an ardent wrestling fan can see anything at all in a ballet, yet they are both escapisms in their way. I suppose the hardest part is being a girl; because girls aren't supposed to be interested in such things.

—Jim Stalker
Louisville, Ky.

Re the readiness of the human race for spaceflight, in connection with the equalities of said race in a peaceful society: Did it ever occur to you, Sir, that the cure is sometimes derived from the very foundations of the malady itself? Insulin was devised from the pancreas of an unborn calf, and injected into the system of a human, it restores the blood sugar balance, which is in turn maintained by the human pancreas. Possibly you will wonder what this has to do with the readiness of Man for space flight. Could it be that the remedy for Man's unrest and distrust of his fellow men lies in this venture? Is it possible that the energies consumed in aggression and protection could be channeled into one purpose? Perhaps a concentrated effort to explore the universe? Possible you say, but not probable. Neither, my friend, was the airplane; nor the horseless carriage; nor the United Nations. But, of course, we take all these things for granted now. As for the baboon (who, by the way, is not nearly so intelligent as the Chimpanzee) how can you place an intelligent, *thinking* human being on the same level with an ape? (Even though they are reportedly linked genetically). And what

makes you think an alien species would have "nothing to do with us"? If for no other reason, curiosity would do the trick. Why else would they undertake space travel?

—Wayne L. Simpson
Peoria, Illinois

Jimmy Gunn's "Green Thumb" startled me. Have we here another Socrates? All my life (in the sense of awareness) I have striven for all the knowledge I could get. Yet I have always gauged my life by the maxim that doing anything without knowing why was infinite stupidity and danger, and inevitable death to the active mind.

If again we consider knowledge a means to an end (i.e. to furnish food to perpetuate body, mind and soul to a farther goal), why are we all now, and why have we since the caveman, centered on the means and ignored the ends? Will we learn love building bombs; spread humanity forming armies; or find out why we're here looking into microscopes, spectrosopes, telescopes or periscopes? There is the scope of the mind, tempered with imagination; and the subject of observation—ourselves. The answer is within ourselves and we ponder our environs. Why?

And lastly: Isn't specialization preventing us from finding the answer? Aren't we concentrating on a square inch of rock two feet from a vein of gold? I say let's learn to use our learning as a guide to further learning, not stuff our heads with irrelevant facts!

—Roger Leland Smith
Upland, Cal.

LAST BRAVE INVADER

(Continued from page 113)

She heard the crack as the lock was broken on a window in the rear of the house, and still she did not stir. But her heart began beating faster, a cold beating that did not warm her body. She began to shiver uncontrollably.

She heard the soft, wary footsteps as he came through the house. In the dimness, she saw his bulk come through the parlor door. A black veil passed momentarily before her eyes, and her gun slipped from lax fingers and fell to the floor with a clatter.

THE BRIDGE

(Continued from page 107)

voice on the radio said. "ALL CLEAR. REPEAT. ALL CLEAR. BOOGIES CLAIM THEY WERE ON A PEACEFUL TRAINING MANEUVER AND GOT OFF COURSE," the sender's low laugh contained no humor. "RESUME TRAFFIC ON THE BRIDGE."

Lowary's hand trembled as he laid the 'mike' on the seat. He looked up at the sky. The jet bomber had veered left, was heading out to sea, heavily escorted. Lowary took off his helmet and signaled Morgan to let the civilians through. He knew Meyers and the others had heard on their own sets.

The enemy had been testing the defenses, he knew. Another calculated move in the cold war. They were probing, hitting hard with psychology. While everyone was relaxing, enjoying the reprieve, they

He leaped to one side, and the glow of the dying fire glinted from his weapon.

But she stood up against the window, in the moonlight, and spread her hands so he could see she was no longer armed.

"I am helpless," she said in a voice that nearly choked her. "I cannot resist your taking me for your love."

His laugh boomed out in the rich darkness, and she could see that he did not lower his weapon.

"Have no fear of that, old woman," he said. "I'm only going to put you out and take your house."

E N D

could very well come back. That would be their way.

Lowary was lighting another cigarette when the soldier came up to him, saluted. "Lieutenant Meyers said to give this to you, sir, and to say that he was sorry if he didn't understand before." He handed Lowary the yellow sheet of paper.

Lowary opened the wrinkled telegram and read it again for the tenth time since that morning. CHILDREN AND I ARRIVED CITY THIS MORNING—WILL SPEND DAY SHOPPING—SEE YOU TONIGHT DARLING—LOVE—DOT.

Lowary put the telegram in his pocket carefully. "Hop in, son. I'll give you a lift," he said to the soldier. He looked over his shoulder, down the river. Then his eyes settled on the bridge. Finally, he said softly, "We're going home." His heart quickened when he said it.

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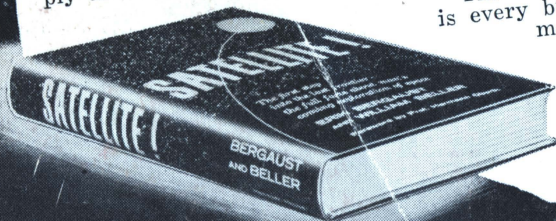
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