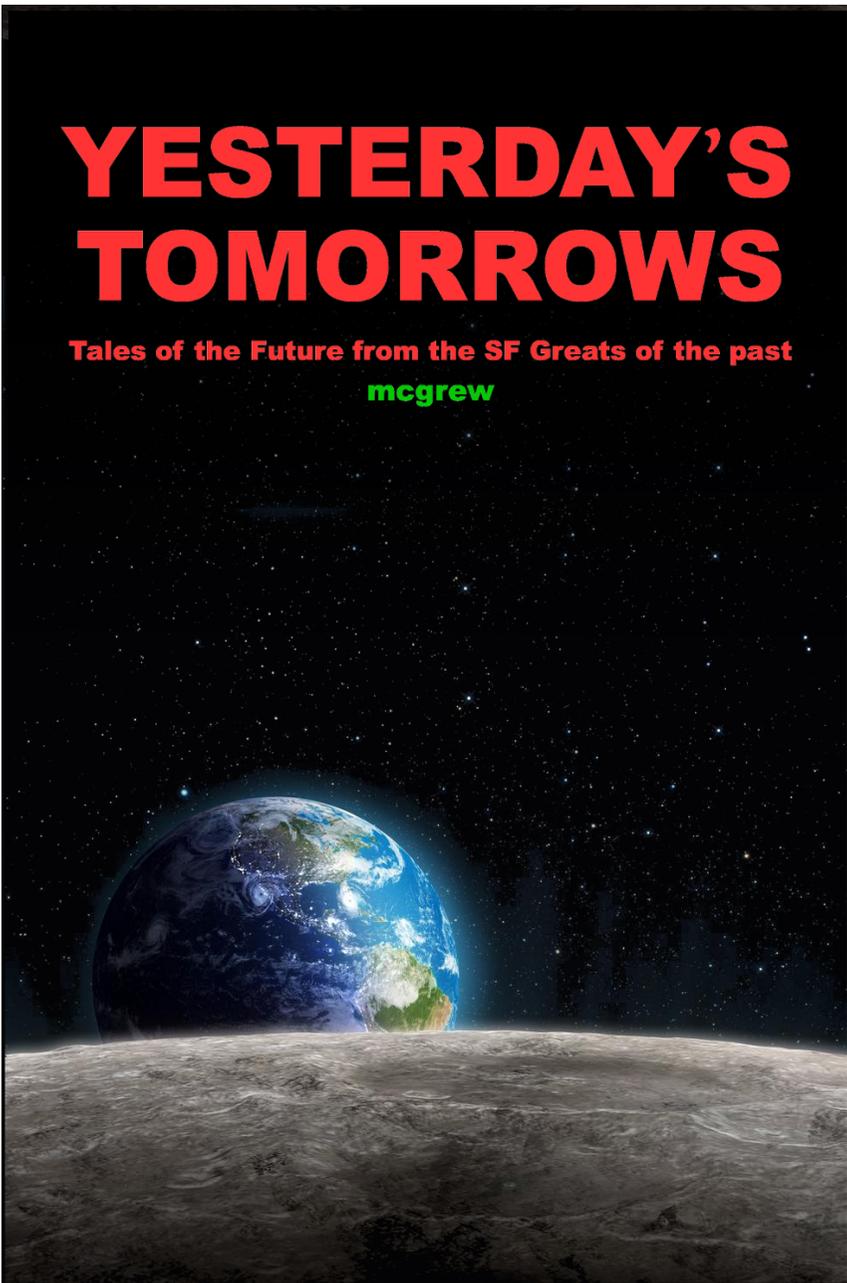


YESTERDAY'S TOMORROWS

Tales of the Future from the SF Greats of the past

mcgrew



YESTERDAY'S TOMORROWS

Tales of the Future From the SF Greats of the Past

Also by mcgrew:

Nobots

Mars, Ho!

Foreward and commentary © 2015 mcgrew

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This book started with a search for public domain science fiction novels I could post on mcgrewbooks.com. I found a lot of public domain short stories, out of the thousands of short stories published in the last century.



One might think I would be all for ever-increasing copyright lengths, having registered copyrights as early as 1984 and still registering them. One would be incorrect.

Art and literature, like science and technology, are built on what has come before. “If I see farther than ordinary men, it is because I stand on the shoulders of giants.”

Art (especially music) and literature are both suffering very badly because of the ridiculously long copyrights, and we, as a society, stand to lose much if not most of it. Imagine how technology would suffer if patents lasted for ninety five years! That’s how art and literature are suffering.

Many of the twentieth century science fiction giants I would have liked to have included, such as Robert Heinlein and Arthur C. Clarke, have no works that have entered the public domain.

But as I said, I was able to collect enough for this book, which I hope you enjoy.

In assembling this, I’ve tried to get it as close to the originals as possible, changing nothing except typeface, page size, and line spacing. I’ve even left in typographical errors when possible, but these stories are from books that have largely had errors that appeared in the original magazines “corrected”. Some of the edited versions have edits marked; I reinserted the typos. Since I didn’t know where illustrations were originally placed, I put them as close to the text describing them as possible – with the exception of the first story, where illustrations might be spoilers.

I thought this project would be easy, but I was wrong. It seems that after six decades I still don’t know myself very well, and I soon complicated it and strove for something more than

my original goal.

I ran across one very good story I wanted to add to the book, but could only find a PDF of pages scanned from the magazine. So I opened it in GIMP, converted it to image files and ran it through an OCR program. Then, of course, I had to edit it to remove the inevitable OCR errors.

When I finished this labor-intensive chore, a thought hit me – I wanted to get this as close to the original as possible, why not present the original scanned material? I kept the original OCR of course; I'll need it for the HTML version of this book.

I started looking for original scans of stories I had chosen for this book, and found five of them. This added more work, since these scans were from magazines that were largely printed on newsprint and were over half a century old. There was scanned dirt, smudges, and other artifacts of time, as well as errors introduced by the scanning process itself that had to be corrected. But I think the final product is worth the work employed.

The scanned stories are largely identical to the magazines, except page size and therefore the size of the typeface may be different. It's possible I've removed smudges and other errors introduced in the primitive printing technologies used to print these old books. Also, I've removed the magazines' page numbers and "continued on page..." statements.

These old stories remind one (well, remind *me* even if I'm the only one) of how far science and technology have progressed in the last century, and how only a stroke of genius or luck can really foretell anything. Nobody except Murray Leinster foresaw the internet, and I doubt he thought his story was in any way prescient.

A couple of these stories have photographic film, and who in the twentieth century ever envisioned a digital future where film was quaintly obsolete? Well, *maybe* Poul Anderson, who has photography in *Industrial Revolution* not only with no

mention of film, but they send the photos electronically to a space ship.

When these stories were written, there were no space stations, no artificial satellites... in fact, nothing built by man had ever been in outer space. There were no space telescopes, and Earth-bound telescopes have greatly improved, with computer control to eliminate distortions caused by the Earth's atmosphere, the invention of radio telescopes – telescopes that measure frequencies of light and radiation the human eye can't see.

Venus and Mars were blurs, and of course imagination had science fiction writers envisioning intelligent life on them. We now know, of course, that both planets are lifeless.

I was born in 1952, the world's first programmable electronic computer was patented six years earlier, and I was twelve before I saw my first one.

When I was a child, almost all televisions and programming were black and white. There was no way to record a TV show at home. Homes had no microwave ovens. Automobiles had no disc brakes, antilock braking systems, air bags, or even seat belts.

Medicine was primitive. There were no cat scans or ultrasonic imaging, and in fact the physician's only tools were his knowledge, a stethoscope, and an x-ray machine.

Star Trek made its maiden voyage when I was fourteen. The “communicators”, Uhura's bluetooth thing in her ear, doors that opened and closed by themselves, voice activated computers with flat screens, all were as much fantasy as the replicators and warp engines.

I live in a science fiction world. *We have robots on Mars!*

Today, I have an amazing, wondrous thing in my pocket. To someone who is now five years old, it holds no wonder. What's the big deal?

When I was five, such a thing had never been envisioned by anyone.

When I was five, a telephone was a large, heavy, clumsy

thing that hung on a wall or sat on a table, tethered to a wall. A phone in one's pocket was a fantasy even ten years later when *The Man From Uncle* had one like a pen. There was no such thing as the internet; indeed, only multimillion dollar organizations had computers at all, and they weren't networked.

When I was five, a camera, even a small one, was a bulky thing that usually sat in a closet or drawer until a vacation or a birthday party or some other special occasion came along. You would go to the drugstore, buy a few rolls of film, photograph what you wanted, send the film to be developed, and the photos would come back a week later.

This marvelous device will take a decent picture without film, instantly viewable in color, and can be immediately sent to anyone in the entire world.

What's more, when I was five, nobody had sound recorders. Well, almost nobody – Roger's dad worked at a radio station, and Roger had an old wire recorder that his dad had brought home from work. We were all amazed by it and had all sorts of fun with Roger's fart recorder. Even ten years later, my tape recorder was the size of a cigar box. A good one was the size of a small suitcase. Now it's built into that wondrous device in my pocket, which holds hundreds of songs in high fidelity.

A movie was something you saw at a theater or on TV, or one a rich family had made of themselves with an eight millimeter film camera; very poor quality picture and no sound, unless you count the sound of the shutter clacking sixteen times a second. The camera and the projector were fairly large and clunky, and very expensive.

This device will make movies, with sound, in high definition, and send them instantly to anywhere in the world.

It contains a library with more books than any one person could read in a lifetime. Read *Tale of Two Cities*? Just pull this marvelous device from my pocket, there are more books on it than a large metropolitan library, even if they aren't exactly "on" it.

It has the largest encyclopedia ever made. One can look up almost any fact one wishes. Want to read a newspaper? When I was five, someone threw a paper on the porch in the morning, which would be read and discarded. Now, just pull the device from your pocket, and almost every newspaper published is there.

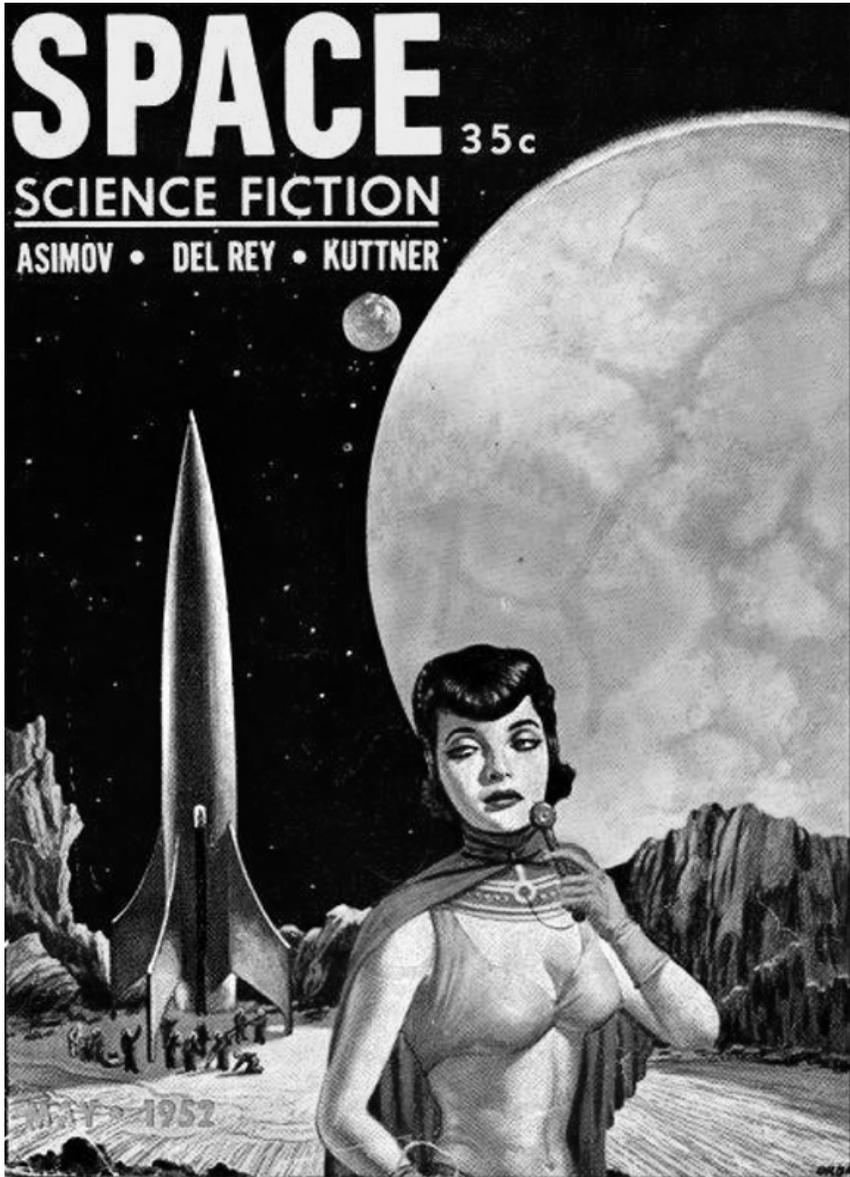
Want to listen to the radio? When I was five there were radios that would fit, albeit not very comfortably, in a shirt pocket. They were full of static and would only pick up stations close by. This device will let me listen to almost any radio station on the planet.

Works of visual art by the great masters, all instantly available.

To a five year old, it's nothing special. These things were always around.

But the five year old is ignorant. The device in my pocket is indeed a wondrous thing. The wondrous things today's five year olds will see are beyond our imagination today, just as the phone in my pocket was something beyond imagination when I was five.

Yet science fiction has gone hand in hand with real science and technology. Many science fiction writers were also scientists. Much scientific and technological jargon was coined in the pages of the science fiction magazines. The words robotics, gas giant, astronaut... actually, the first use of the word "astronaut" is in a story in this book.



Story illustrations by Schecterson

The first story is a novelette from one of my all-time favorite authors, Isaac Asimov. He published his first short story, *Marooned Off Vesta*, in 1938. It is still protected by copyright, and in fact, the following title, *Youth*, is the only one of Asimov's works to have entered the public domain.



He was one of the “Big Three” science fiction writers during his lifetime, the other two being Robert Heinlein and Arthur C. Clarke. As I said before, I would have loved to include those two fine writers, but none of their work is in the public domain. Quite a few of the other late greats I researched also have no public domain works.

Dr. Asimov wasn't just a science fiction writer, he was a real scientist. He held a PhD in biochemistry and taught and did cancer research at Boston University.

He was born Isaak Yudovich Ozimov in 1920 in Russia, and moved to the United States with his parents when he was three.

He was known as “The Great Educator” because so many of his over five hundred books were nonfiction. In fact, he has titles published that cover nine of the ten Dewey Decimal System categories.

He was also great with his fans, personally answering fan mail. I drunkenly penned a note and mailed it when I was in the Air Force, and was incredibly surprised and greatly pleased to receive a postcard in return, typed and signed in his own hand.

Sadly, I've lost that postcard. Maybe some day when I'm re-reading one of the dozen or so Asimov books on my shelf it will fall out of one of them, but I'm not the least bit hopeful.

The following novelette was originally published in *Space Science Fiction* in its debut issue in May of 1952.

Youth

Isaac Asimov

There was a spatter of pebbles against the window and the youngster stirred in his sleep. Another, and he was awake.

He sat up stiffly in bed. Seconds passed while he interpreted his strange surroundings. He wasn't in his own home, of course. This was out in the country. It was colder than it should be and there was green at the window.

"Slim!"

The call was a hoarse, urgent whisper, and the youngster bounded to the open window.

Slim wasn't his real name, but the new friend he had met the day before had needed only one look at his slight figure to say, "You're Slim." He added, "I'm Red."

Red wasn't his real name, either, but its appropriateness was obvious. They were friends instantly with the quick unquestioning friendship of young ones not yet quite in adolescence, before even the first stains of adulthood began to make their appearance.

Slim cried, "Hi, Red!" and waved cheerfully, still blinking the sleep out of himself.

Red kept to his croaking whisper, "Quiet! You want to wake somebody?"

Slim noticed all at once that the sun scarcely topped the low hills in the east, that the shadows were long and soft, and that the grass was wet.

Slim said, more softly, "What's the matter?"

Red only waved for him to come out.

Slim dressed quickly, gladly confining his morning wash to the momentary sprinkle of a little lukewarm water. He let the air dry the exposed portions of his body as he ran out, while bare skin grew wet against the dewy grass.

Red said, "You've got to be quiet. If Mom wakes up or Dad or your Dad or even any of the hands then it'll be 'Come on

in or you'll catch your death of cold.”

He mimicked voice and tone faithfully, so that Slim laughed and thought that there had never been so funny a fellow as Red.

Slim said, eagerly, “Do you come out here every day like this, Red? Real early? It’s like the whole world is just yours, isn’t it, Red? No one else around and all like that.” He felt proud at being allowed entrance into this private world.

Red stared at him sidelong. He said carelessly, “I’ve been up for hours. Didn’t you hear it last night?”

“Hear what?”

“Thunder.”

“Was there a thunderstorm?” Slim never slept through a thunderstorm.

“I guess not. But there was thunder. I heard it, and then I went to the window and it wasn’t raining. It was all stars and the sky was just getting sort of almost gray. You know what I mean?”

Slim had never seen it so, but he nodded.

“So I just thought I’d go out,” said Red.

They walked along the grassy side of the concrete road that split the panorama right down the middle all the way down to where it vanished among the hills. It was so old that Red’s father couldn’t tell Red when it had been built. It didn’t have a crack or a rough spot in it.

Red said, “Can you keep a secret?”

“Sure, Red. What kind of a secret?”

“Just a secret. Maybe I’ll tell you and maybe I won’t. I don’t know yet.” Red broke a long, supple stem from a fern they passed, methodically stripped it of its leaflets and swung what was left whip-fashion. For a moment, he was on a wild charger, which reared and champed under his iron control. Then he got tired, tossed the whip aside and stowed the charger away in a corner of his imagination for future use.

He said, “There’ll be a circus around.”

Slim said, “That’s no secret. I knew that. My Dad told

me even before we came here—”

“That’s not the secret. Fine secret! Ever see a circus?”

“Oh, sure. You bet.”

“Like it?”

“Say, there isn’t anything I like better.”

Red was watching out of the corner of his eyes again. “Ever think you would like to be with a circus? I mean, for good?”

Slim considered, “I guess not. I think I’ll be an astronomer like my Dad. I think he wants me to be.”

“Huh! Astronomer!” said Red.

Slim felt the doors of the new, private world closing on him and astronomy became a thing of dead stars and black, empty space.

He said, placatingly, “A circus *would* be more fun.”

“You’re just saying that.”

“No, I’m not. I mean it.”

Red grew argumentative. “Suppose you had a chance to join the circus right now. What would you do?”

“I—I—”

“See!” Red affected scornful laughter.

Slim was stung. “I’d join up.”

“Go on.”

“Try me.”

Red whirled at him, strange and intense. “You meant that? You want to go in with me?”

“What do you mean?” Slim stepped back a bit, surprised by the unexpected challenge.

“I got something that can get us into the circus. Maybe someday we can even have a circus of our own. We could be the biggest circus-fellows in the world. That’s if you want to go in with me. Otherwise—Well, I guess I can do it on my own. I just thought: Let’s give good old Slim a chance.”

The world was strange and glamorous, and Slim said, “Sure thing, Red. I’m in! What is it, huh, Red? Tell me what it is.”

“Figure it out. What’s the most important thing in circuses?”

Slim thought desperately. He wanted to give the right answer. Finally, he said, “Acrobats?”

“Holy Smokes! I wouldn’t go five steps to look at acrobats.”

“I don’t know then.”

“Animals, that’s what! What’s the best side-show? Where are the biggest crowds? Even in the main rings the best acts are animal acts.” There was no doubt in Red’s voice.

“Do you think so?”

“Everyone thinks so. You ask anyone. Anyway, I found animals this morning. Two of them.”

“And you’ve got them?”

“Sure. That’s the secret. Are you telling?”

“Of course not.”

“Okay. I’ve got them in the barn. Do you want to see them?”

They were almost at the barn; its huge open door black. Too black. They had been heading there all the time. Slim stopped in his tracks.

He tried to make his words casual. “Are they big?”

“Would I fool with them if they were big? They can’t hurt you. They’re only about so long. I’ve got them in a cage.”

They were in the barn now and Slim saw the large cage suspended from a hook in the roof. It was covered with stiff canvas.

Red said, “We used to have some bird there or something. Anyway, they can’t get away from there. Come on, let’s go up to the loft.”

They clambered up the wooden stairs and Red hooked the cage toward them.

Slim pointed and said, “There’s sort of a hole in the canvas.”

Red frowned. “How’d that get there?” He lifted the canvas, looked in, and said, with relief, “They’re still there.”

“The canvas appeared to be burned,” worried Slim.

“You want to look, or don’t you?”

Slim nodded slowly. He wasn’t sure he wanted to, after all. They might be—

But the canvas had been jerked off and there they were. Two of them, the way Red said. They were small, and sort of disgusting-looking. The animals moved quickly as the canvas lifted and were on the side toward the youngsters. Red poked a cautious finger at them.

“Watch out,” said Slim, in agony.

“They don’t hurt you,” said Red. “Ever see anything like them?”

“No.”

“Can’t you see how a circus would jump at a chance to have these?”

“Maybe they’re too small for a circus.”

Red looked annoyed. He let go the cage which swung back and forth pendulum-fashion. “You’re just trying to back out, aren’t you?”

“No, I’m not. It’s just—”

“They’re not too small, don’t worry. Right now, I’ve only got one worry.”

“What’s that?”

“Well, I’ve got to keep them till the circus comes, don’t I? I’ve got to figure out what to feed them meanwhile.”

The cage swung and the little trapped creatures clung to its bars, gesturing at the youngsters with queer, quick motions—almost as though they were intelligent.

II

The Astronomer entered the dining room with decorum. He felt very much the guest.

He said, “Where are the youngsters? My son isn’t in his room.”

The Industrialist smiled. “They’ve been out for hours.

However, breakfast was forced into them among the women some time ago, so there is nothing to worry about. Youth, Doctor, youth!"

"Youth!" The word seemed to depress the Astronomer.

They ate breakfast in silence. The Industrialist said once, "You really think they'll come. The day looks so—*normal*."

The Astronomer said, "They'll come."

That was all.

Afterward the Industrialist said, "You'll pardon me. I can't conceive your playing so elaborate a hoax. You really spoke to them?"

"As I speak to you. At least, in a sense. They can project thoughts."

"I gathered that must be so from your letter. How, I wonder."

"I could not say. I asked them and, of course, they were vague. Or perhaps it was just that I could not understand. It involves a projector for the focussing of thought and, even more than that, conscious attention on the part of both projector and receptor. It was quite a while before I realized they were trying to think at me. Such thought-projectors may be part of the science they will give us."

"Perhaps," said the Industrialist. "Yet think of the changes it would bring to society. A thought-projector!"

"Why not? Change would be good for us."

"I don't think so."

"It is only in old age that change is unwelcome," said the Astronomer, "and races can be old as well as individuals."

The Industrialist pointed out the window. "You see that road. It was built Beforethewars. I don't know exactly when. It is as good now as the day it was built. We couldn't possibly duplicate it now. The race was young when that was built, eh?"

"Then? Yes! At least they weren't afraid of new things."

"No. I wish they had been. Where is the society of Beforethewars? Destroyed, Doctor! What good were youth and

new things? We are better off now. The world is peaceful and jogs along. The race goes nowhere but after all, there is nowhere to go. *They* proved that. The men who built the road. I will speak with your visitors as I agreed, if they come. But I think I will only ask them to go.”

“The race is not going nowhere,” said the Astronomer, earnestly. “It is going toward final destruction. My university has a smaller student body each year. Fewer books are written. Less work is done. An old man sleeps in the sun and his days are peaceful and unchanging, but each day finds him nearer death all the same.”

“Well, well,” said the Industrialist.

“No, don’t dismiss it. Listen. Before I wrote you, I investigated your position in the planetary economy.”

“And you found me solvent?” interrupted the Industrialist, smiling.

“Why, yes. Oh, I see, you are joking. And yet—perhaps the joke is not far off. You are less solvent than your father and he was less solvent than his father. Perhaps your son will no longer be solvent. It becomes too troublesome for the planet to support even the industries that still exist, though they are toothpicks to the oak trees of Beforethewars. We will be back to village economy and then to what? The caves?”

“And the infusion of fresh technological knowledge will be the changing of all that?”

“Not just the new knowledge. Rather the whole effect of change, of a broadening of horizons. Look, sir, I chose you to approach in this matter not only because you were rich and influential with government officials, but because you had an unusual reputation, for these days, of daring to break with tradition. Our people will resist change and you would know how to handle them, how to see to it that—that—”

“That the youth of the race is revived?”

“Yes.”

“With its atomic bombs?”

“The atomic bombs,” returned the Astronomer, “need

not be the end of civilization. These visitors of mine had their atomic bomb, or whatever their equivalent was on their own worlds, and survived it, because they didn't give up. Don't you see? It wasn't the bomb that defeated us, but our own shell shock. This may be the last chance to reverse the process."

"Tell me," said the Industrialist, "what do these friends from space want in return?"

The Astronomer hesitated. He said, "I will be truthful with you. They come from a denser planet. Ours is richer in the lighter atoms."

"They want magnesium? Aluminum?"

"No, sir. Carbon and hydrogen. They want coal and oil."

"Really?"

The Astronomer said, quickly, "You are going to ask why creatures who have mastered space travel, and therefore atomic power, would want coal and oil. I can't answer that."

The Industrialist smiled. "But I can. This is the best evidence yet of the truth of your story. Superficially, atomic power would seem to preclude the use of coal and oil. However, quite apart from the energy gained by their combustion they remain, and always will remain, the basic raw material for all organic chemistry. Plastics, dyes, pharmaceuticals, solvents. Industry could not exist without them, even in an atomic age. Still, if coal and oil are the low price for which they would sell us the troubles and tortures of racial youth, my answer is that the commodity would be dear if offered gratis."

The Astronomer sighed and said, "There are the boys!"

They were visible through the open window, standing together in the grassy field and lost in animated conversation. The Industrialist's son pointed imperiously and the Astronomer's son nodded and made off at a run toward the house.

The Industrialist said, "There is the Youth you speak of. Our race has as much of it as it ever had."

"Yes, but we age them quickly and pour them into the

mold.”

Slim scuttled into the room, the door banging behind him.

The Astronomer said, in mild disapproval, “What’s this?”

Slim looked up in surprise and came to a halt. “I beg your pardon. I didn’t know anyone was here. I am sorry to have interrupted.” His enunciation was almost painfully precise.

The Industrialist said, “It’s all right, youngster.”

But the Astronomer said, “Even if you had been entering an empty room, son, there would be no cause for slamming a door.”

“Nonsense,” insisted the Industrialist. “The youngster has done no harm. You simply scold him for being young. You, with your views!”

He said to Slim, “Come here, lad.”

Slim advanced slowly.

“How do you like the country, eh?”

“Very much, sir, thank you.”

“My son has been showing you about the place, has he?”

“Yes, sir. Red—I mean—”

“No, no. Call him Red. I call him that myself. Now tell me, what are you two up to, eh?”

Slim looked away. “Why—just exploring, sir.”

The Industrialist turned to the Astronomer. “There you are, youthful curiosity and adventure-lust. The race has not yet lost it.”

Slim said, “Sir?”

“Yes, lad.”

The youngster took a long time in getting on with it. He said, “Red sent me in for something good to eat, but I don’t exactly know what he meant. I didn’t like to say so.”

“Why, just ask cook. She’ll have something good for young’uns to eat.”

“Oh, no, sir. I mean for animals.”

“For animals?”

“Yes, sir. What do animals eat?”

The Astronomer said, “I am afraid my son is city-bred.”

“Well,” said the Industrialist, “there’s no harm in that. What kind of an animal, lad?”

“A small one, sir.”

“Then try grass or leaves, and if they don’t want that, nuts or berries would probably do the trick.”

“Thank you, sir.” Slim ran out again, closing the door gently behind him.

The Astronomer said, “Do you suppose they’ve trapped an animal alive?” He was obviously perturbed.

“That’s common enough. There’s no shooting on my estate and it’s tame country, full of rodents and small creatures. Red is always coming home with pets of one sort or another. They rarely maintain his interest for long.”

He looked at the wall clock. “Your friends should have been here by now, shouldn’t they?”

III

The swaying had come to a halt and it was dark. The Explorer was not comfortable in the alien air. It felt as thick as soup and he had to breathe shallowly. Even so—

He reached out in a sudden need for company. The Merchant was warm to the touch. His breathing was rough, he moved in an occasional spasm, and was obviously asleep. The Explorer hesitated and decided not to wake him. It would serve no real purpose.

There would be no rescue, of course. That was the penalty paid for the high profits which unrestrained competition could lead to. The Merchant who opened a new planet could have a ten year monopoly of its trade, which he might hug to himself or, more likely, rent out to all comers at a stiff price. It followed that planets were searched for in secrecy

and, preferably, away from the usual trade routes. In a case such as theirs, then, there was little or no chance that another ship would come within range of their subetherics except for the most improbable of coincidences. Even if they were in their ship, that is, rather than in this—this—*cage*.

The Explorer grasped the thick bars. Even if they blasted those away, as they could, they would be stuck too high in open air for leaping.

It was too bad. They had landed twice before in the scout-ship. They had established contact with the natives who were grotesquely huge, but mild and unaggressive. It was obvious that they had once owned a flourishing technology, but hadn't faced up to the consequences of such a technology. It would have been a wonderful market.

And it was a tremendous world. The Merchant, especially, had been taken aback. He had known the figures that expressed the planet's diameter, but from a distance of two light-seconds, he had stood at the visi-plate and muttered, "Unbelievable!"

"Oh, there are larger worlds," the Explorer said. It wouldn't do for an Explorer to be too easily impressed.

"Inhabited?"

"Well, no."

"Why, you could drop your planet into that large ocean and drown it."

The Explorer smiled. It was a gentle dig at his Arcturian homeland, which was smaller than most planets. He said, "Not quite."

The Merchant followed along the line of his thoughts. "And the inhabitants are large in proportion to their world?" He sounded as though the news struck him less favorably now.

"Nearly ten times our height."

"Are you sure they are friendly?"

"That is hard to say. Friendship between alien intelligences is an imponderable. They are not dangerous, I think. We've come across other groups that could not maintain

equilibrium after the atomic war stage and you know the results. Introversion. Retreat. Gradual decadence and increasing gentleness.”

“Even if they are such monsters?”

“The principle remains.”

It was about then that the Explorer felt the heavy throbbing of the engines.

He frowned and said, “We are descending a bit too quickly.”

There had been some speculation on the dangers of landing some hours before. The planetary target was a huge one for an oxygen-water world. Though it lacked the size of the uninhabitable hydrogen-ammonia planets and its low density made its surface gravity fairly normal, its gravitational forces fell off but slowly with distance. In short, its gravitational potential was high and the ship’s Calculator was a run-of-the-mill model not designed to plot landing trajectories at that potential range. That meant the Pilot would have to use manual controls.

It would have been wiser to install a more high-powered model, but that would have meant a trip to some outpost of civilization; lost time; perhaps a lost secret. The Merchant demanded an immediate landing.

The Merchant felt it necessary to defend his position now. He said angrily to the Explorer, “Don’t you think the Pilot knows his job? He landed you safely twice before.”

Yes, thought the Explorer, in a scout-ship, not in this unmaneuverable freighter. Aloud, he said nothing.

He kept his eye on the visi-plate. They were descending too quickly. There was no room for doubt. Much too quickly.

The Merchant said, peevishly, “Why do you keep silence?”

“Well, then, if you wish me to speak, I would suggest that you strap on your Floater and help me prepare the Ejector.”

The Pilot fought a noble fight. He was no beginner. The

atmosphere, abnormally high and thick in the gravitational potential of this world whipped and burned about the ship, but to the very last it looked as though he might bring it under control despite that.

He even maintained course, following the extrapolated line to the point on the northern continent toward which they were headed. Under other circumstances, with a shade more luck, the story would eventually have been told and retold as a heroic and masterly reversal of a lost situation. But within sight of victory, tired body and tired nerves clamped a control bar with a shade too much pressure. The ship, which had almost levelled off, dipped down again.

There was no room to retrieve the final error. There was only a mile left to fall. The Pilot remained at his post to the actual landing, his only thought that of breaking the force of the crash, of maintaining the spaceworthiness of the vessel. He did not survive. With the ship bucking madly in a soupy atmosphere, few Ejectors could be mobilized and only one of them in time.

When afterwards, the Explorer lifted out of unconsciousness and rose to his feet, he had the definite feeling that but for himself and the Merchant, there were no survivors. And perhaps that was an over-calculation. His Floater had burnt out while still sufficiently distant from surface to have the fall stun him. The Merchant might have had less luck, even, than that.

He was surrounded by a world of thick, ropy stalks of grass, and in the distance were trees that reminded him vaguely of similar structures on his native Arcturian world except that their lowest branches were high above what he would consider normal tree-tops.

He called, his voice sounding basso in the thick air and the Merchant answered. The Explorer made his way toward him, thrusting violently at the coarse stalks that barred his path.

“Are you hurt?” he asked.

The Merchant grimaced. "I've sprained something. It hurts to walk."

The Explorer probed gently. "I don't think anything is broken. You'll have to walk despite the pain."

"Can't we rest first?"

"It's important to try to find the ship. If it is spaceworthy or if it can be repaired, we may live. Otherwise, we won't."

"Just a few minutes. Let me catch my breath."

The Explorer was glad enough for those few minutes. The Merchant's eyes were already closed. He allowed his to do the same.

He heard the trampling and his eyes snapped open. Never sleep on a strange planet, he told himself futilely.

The Merchant was awake too and his steady screaming was a rumble of terror.

The Explorer called, "It's only a native of this planet. It won't harm you."

But even as he spoke, the giant had swooped down and in a moment they were in its grasp being lifted closer to its monstrous ugliness.

The Merchant struggled violently and, of course, quite futilely. "Can't you talk to it?" he yelled.

The Explorer could only shake his head. "I can't reach it with the Projector. It won't be listening."

"Then blast it. Blast it down."

"We can't do that." The phrase "you fool" had almost been added. The Explorer struggled to keep his self-control. They were swallowing space as the monster moved purposefully away.

"Why not?" cried the Merchant. "You can reach your blaster. I see it in plain sight. Don't be afraid of falling."

"It's simpler than that. If this monster is killed, you'll never trade with this planet. You'll never even leave it. You probably won't live the day out."

"Why? Why?"

“Because this is one of the young of the species. You should know what happens when a trader kills a native young, even accidentally. What’s more, if this is the target-point, then we are on the estate of a powerful native. This might be one of his brood.”

That was how they entered their present prison. They had carefully burnt away a portion of the thick, stiff covering and it was obvious that the height from which they were suspended was a killing one.

Now, once again, the prison-cage shuddered and lifted in an upward arc. The Merchant rolled to the lower rim and startled awake. The cover lifted and light flooded in. As was the case the time before, there were two specimens of the young. They were not very different in appearance from adults of the species, reflected the Explorer, though, of course, they were considerably smaller.

A handful of reedy green stalks was stuffed between the bars. Its odor was not unpleasant but it carried clods of soil at its ends.

The Merchant drew away and said, huskily, “What are they doing?”

The Explorer said, “Trying to feed us, I should judge. At least this seems to be the native equivalent of grass.”

The cover was replaced and they were set swinging again, alone with their fodder.

IV

Slim started at the sound of footsteps and brightened when it turned out to be only Red.

He said, “No one’s around. I had my eye peeled, you bet.”

Red said, “Ssh. Look. You take this stuff and stick it in the cage. I’ve got to scoot back to the house.”

“What is it?” Slim reached reluctantly.

“Ground meat. Holy Smokes, haven’t you ever seen

ground meat? That's what you should've got when I sent you to the house instead of coming back with that stupid grass."

Slim was hurt. "How'd I know they don't eat grass. Besides, ground meat doesn't come loose like that. It comes in cellophane and it isn't that color."

"Sure—in the city. Out here we grind our own and it's always this color till its cooked."

"You mean it isn't cooked?" Slim drew away quickly.

Red looked disgusted. "Do you think animals eat *cooked* food. Come on, take it. It won't hurt you. I tell you there isn't much time."

"Why? What's doing back at the house?"

"I don't know. Dad and your father are walking around. I think maybe they're looking for me. Maybe the cook told them I took the meat. Anyway, we don't want them coming here after me."

"Didn't you ask the cook before you took this stuff?"

"Who? That crab? Shouldn't wonder if she only let me have a drink of water because Dad makes her. Come on. Take it."

Slim took the large glob of meat though his skin crawled at the touch. He turned toward the barn and Red sped away in the direction from which he had come.

He slowed when he approached the two adults, took a few deep breaths to bring himself back to normal, and then carefully and nonchalantly sauntered past. (They were walking in the general direction of the barn, he noticed, but not dead on.)

He said, "Hi, Dad. Hello, sir."

The Industrialist said, "Just a moment, Red. I have a question to ask you?"

Red turned a carefully blank face to his father. "Yes, Dad?"

"Mother tells me you were out early this morning."

"Not real early, Dad. Just a little before breakfast."

"She said you told her it was because you had been

awakened during the night and didn't go back to sleep."

Red waited before answering. Should he have told Mom that?

Then he said, "Yes, sir."

"What was it that awakened you?"

Red saw no harm in it. He said, "I don't know, Dad. It sounded like thunder, sort of, and like a collision, sort of."

"Could you tell where it came from?"

"It *sounded* like it was out by the hill." That was truthful, and useful as well, since the direction was almost opposite that in which the barn lay.

The Industrialist looked at his guest. "I suppose it would do no harm to walk toward the hill."

The Astronomer said, "I am ready."

Red watched them walk away and when he turned he saw Slim peering cautiously out from among the briars of a hedge.

Red waved at him. "Come on."

Slim stepped out and approached. "Did they say anything about the meat?"

"No. I guess they don't know about that. They went down to the hill."

"What for?"

"Search me. They kept asking about the noise I heard. Listen, did the animals eat the meat?"

"Well," said Slim, cautiously, "they were sort of *looking* at it and smelling it or something."

"Okay," Red said, "I guess they'll eat it. Holy Smokes, they've got to eat *something*. Let's walk along toward the hill and see what Dad and your father are going to do."

"What about the animals?"

"They'll be all right. A fellow can't spend all his time on them. Did you give them water?"

"Sure. They drank that."

"See. Come on. We'll look at them after lunch. I tell you what. We'll bring them fruit. Anything'll eat fruit."

Together they trotted up the rise, Red, as usual, in the lead.

V

The Astronomer said, "You think the noise was their ship landing?"

"Don't you think it could be?"

"If it were, they may all be dead."

"Perhaps not." The Industrialist frowned.

"If they have landed, and are still alive, where are they?"

"Think about that for a while." He was still frowning.

The Astronomer said, "I don't understand you."

"They may not be friendly."

"Oh, no. I've spoken with them. They've—"

"You've spoken with them. Call that reconnaissance. What would their next step be? Invasion?"

"But they only have one ship, sir."

"You know that only because they say so. They might have a fleet."

"I've told you about their size. They—"

"Their size would not matter, if they have handweapons that may well be superior to our artillery."

"That is not what I meant."

"I had this partly in mind from the first." The Industrialist went on. "It is for that reason I agreed to see them after I received your letter. Not to agree to an unsettling and impossible trade, but to judge their real purposes. I did not count on their evading the meeting."

He sighed. "I suppose it isn't our fault. You are right in one thing, at any rate. The world has been at peace too long. We are losing a healthy sense of suspicion."

The Astronomer's mild voice rose to an unusual pitch and he said, "I *will* speak. I tell you that there is no reason to suppose they can possibly be hostile. They are small, yes, but

that is only important because it is a reflection of the fact that their native worlds are small. Our world has what is for them a normal gravity, but because of our much higher gravitational potential, our atmosphere is too dense to support them comfortably over sustained periods. For a similar reason the use of the world as a base for interstellar travel, except for trade in certain items, is uneconomical. And there are important differences in chemistry of life due to the basic differences in soils. They couldn't eat our food or we theirs."

"Surely all this can be overcome. They can bring their own food, build domed stations of lowered air pressure, devise specially designed ships."

"They can. And how glibly you can describe feats that are easy to a race in its youth. It is simply that they don't have to do any of that. There are millions of worlds suitable for them in the Galaxy. They don't need this one which isn't."

"How do you know? All this is their information again."

"This I was able to check independently. I am an astronomer, after all."

"That is true. Let me hear what you have to say then, while we walk."

"Then, sir, consider that for a long time our astronomers have believed that two general classes of planetary bodies existed. First, the planets which formed at distances far enough from their stellar nucleus to become cool enough to capture hydrogen. These would be large planets rich in hydrogen, ammonia and methane. We have examples of these in the giant outer planets. The second class would include those planets formed so near the stellar center that the high temperature would make it impossible to capture much hydrogen. These would be smaller planets, comparatively poorer in hydrogen and richer in oxygen. We know that type very well since we live on one. Ours is the only solar system we know in detail, however, and it has been reasonable for us to assume that these were the *only* two planetary classes."

"I take it then that there is another."

“Yes. There is a super-dense class, still smaller, poorer in hydrogen, than the inner planets of the solar system. The ratio of occurrence of hydrogen-ammonia planets and these super-dense water-oxygen worlds of theirs over the entire Galaxy—and remember that they have actually conducted a survey of significant sample volumes of the Galaxy which we, without interstellar travel, cannot do—is about 3 to 1. This leaves them seven million super-dense worlds for exploration and colonization.”

The Industrialist looked at the blue sky and the green-covered trees among which they were making their way. He said, “And worlds like ours?”

The Astronomer said, softly, “Ours is the first solar system they have found which contains them. Apparently the development of our solar system was unique and did not follow the ordinary rules.”

The Industrialist considered that. “What it amounts to is that these creatures from space are asteroid-dwellers.”

“No, no. The asteroids are something else again. They occur, I was told, in one out of eight stellar systems, but they’re completely different from what we’ve been discussing.”

“And how does your being an astronomer change the fact that you are still only quoting their unsupported statements?”

“But they did not restrict themselves to bald items of information. They presented me with a theory of stellar evolution which I had to accept and which is more nearly valid than anything our own astronomy has ever been able to devise, if we except possible lost theories dating from Beforethewars. Mind you, their theory had a rigidly mathematical development and it predicted just such a Galaxy as they describe. So you see, they have all the worlds they wish. They are not land-hungry. Certainly not for our land.”

“Reason would say so, if what you say is true. But creatures may be intelligent and not reasonable. Our

forefathers were presumably intelligent, yet they were certainly not reasonable. Was it reasonable to destroy almost all their tremendous civilization in atomic warfare over causes our historians can no longer accurately determine?" The Industrialist brooded over it. "From the dropping of the first atom bomb over those islands—I forget the ancient name—there was only one end in sight, and in plain sight. Yet events were allowed to proceed to that end."

He looked up, said briskly, "Well, where are we? I wonder if we are not on a fool's errand after all."

But the Astronomer was a little in advance and his voice came thickly. "No fool's errand, sir. Look there."

VI

Red and Slim had trailed their elders with the experience of youth, aided by the absorption and anxiety of their fathers. Their view of the final object of the search was somewhat obscured by the underbrush behind which they remained.

Red said, "Holy Smokes. Look at that. It's all shiny silver or something."

But it was Slim who was really excited. He caught at the other. "I know what this is. It's a space-ship. That must be why my father came here. He's one of the biggest astronomers in the world and your father would have to call him if a space-ship landed on his estate."

"What are you talking about? Dad didn't even know that thing was there. He only came here because I told him I heard the thunder from here. Besides, there isn't any such thing as a space-ship."

"Sure, there is. Look at it. See those round things. They are ports. And you can see the rocket tubes."

"How do you know so much?"

Slim was flushed. He said, "I read about them. My father has books about them. Old books. From Beforethewars."

“Huh. Now I know you’re making it up. Books from Beforethewars!”

“My father *has* to have them. He teaches at the University. It’s his job.”

His voice had risen and Red had to pull at him. “You want them to hear us?” he whispered indignantly.

“Well, it is, too, a space-ship.”

“Look here, Slim, you mean that’s a ship from another world.”

“It’s *got* to be. Look at my father going round and round it. He wouldn’t be so interested if it was anything else.”

“Other worlds! Where are there other worlds?”

“Everywhere. How about the planets? They’re worlds just like ours, some of them. And other stars probably have planets. There’s probably zillions of planets.”

Red felt outweighed and outnumbered. He muttered, “You’re crazy!”

“All right, then. I’ll show you.”

“Hey! Where are you going?”

“Down there. I’m going to ask my father. I suppose you’ll believe it if *he* tells you. I suppose you’ll believe a Professor of Astronomy knows what—”

He had scrambled upright.

Red said, “Hey. You don’t want them to see us. We’re not supposed to be here. Do you want them to start asking questions and find out about our animals?”

“I don’t care. You said I was crazy.”

“Snitcher! You promised you wouldn’t tell.”

“I’m *not* going to tell. But if they find out themselves, it’s your fault, for starting an argument and saying I was crazy.”

“I take it back, then,” grumbled Red.

“Well, all right. You better.”

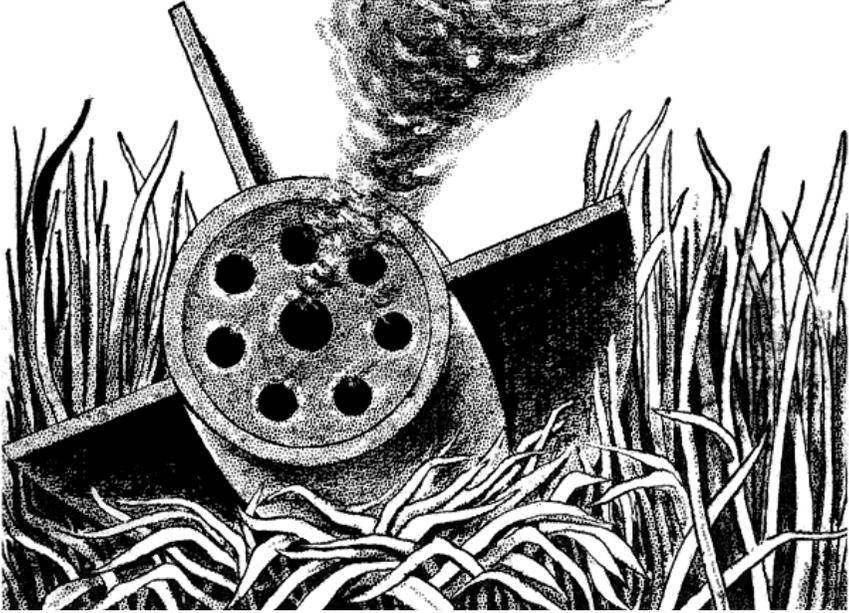
In a way, Slim was disappointed. He wanted to see the space-ship at closer quarters. Still, he could not break his vow of secrecy even in spirit without at least the excuse of personal

insult.

Red said, "It's awfully small for a space-ship."

"Sure, because it's probably a scout-ship."

"I'll bet Dad couldn't even get into the old thing."



So much Slim realized to be true. It was a weak point in his argument and he made no answer. His interest was absorbed by the adults.

Red rose to his feet; an elaborate attitude of boredom all about him. "Well, I guess we better be going. There's business to do and I can't spend all day here looking at some old space-ship or whatever it is. We've got to take care of the animals if we're going to be circus-folks. That's the first rule with circus-folks. They've got to take care of the animals. And," he finished virtuously, "that's what I aim to do, anyway."

Slim said, "What for, Red? They've got plenty of meat. Let's watch."

"There's no fun in watching. Besides Dad and your father are going away and I guess it's about lunch time."

Red became argumentative. “Look, Slim, we can’t start acting suspicious or they’re going to start investigating. Holy Smokes, don’t you ever read any detective stories? When you’re trying to work a big deal without being caught, it’s practically the main thing to keep on acting just like always. Then they don’t suspect anything. That’s the first law—”

“Oh, all right.”

Slim rose resentfully. At the moment, the circus appeared to him a rather tawdry and shoddy substitute for the glories of astronomy, and he wondered how he had come to fall in with Red’s silly scheme.

Down the slope they went, Slim, as usual, in the rear.

VII

The Industrialist said, “It’s the workmanship that gets me. I never saw such construction.”

“What good is it now?” said the Astronomer, bitterly. “There’s nothing left. There’ll be no second landing. This ship detected life on our planet through accident. Other exploring parties would come no closer than necessary to establish the fact that there were no super-dense worlds existing in our solar system.”

“Well, there’s no quarreling with a crash landing.”

“The ship hardly seems damaged. If only some had survived, the ship might have been repaired.”

“If they had survived, there would be no trade in any case. They’re too different. Too disturbing. In any case—it’s over.”

They entered the house and the Industrialist greeted his wife calmly. “Lunch about ready, dear.”

“I’m afraid not. You see—” She looked hesitantly at the Astronomer.

“Is anything wrong?” asked the Industrialist. “Why not tell me? I’m sure our guest won’t mind a little family discussion.”

“Pray don’t pay any attention whatever to me,” muttered the Astronomer. He moved miserably to the other end of the living room.

The woman said, in low, hurried tones, “Really, dear, cook’s that upset. I’ve been soothing her for hours and honestly, I don’t know why Red should have done it.”

“Done what?” The Industrialist was more amused than otherwise. It had taken the united efforts of himself and his son months to argue his wife into using the name “Red” rather than the perfectly ridiculous (viewed youngster fashion) name which was his real one.

She said, “He’s taken most of the chopped meat.”

“He’s eaten it?”

“Well, I hope not. It was raw.”

“Then what would he want it for?”

“I haven’t the slightest idea. I haven’t seen him since breakfast. Meanwhile cook’s just furious. She caught him vanishing out the kitchen door and there was the bowl of chopped meat just about empty and she was going to use it for lunch. Well, you know cook. She had to change the lunch menu and that means she won’t be worth living with for a week. You’ll just have to speak to Red, dear, and make him promise not to do things in the kitchen any more. And it wouldn’t hurt to have him apologize to cook.”

“Oh, come. She works for us. If we don’t complain about a change in lunch menu, why should she?”

“Because she’s the one who has double-work made for her, and she’s talking about quitting. Good cooks aren’t easy to get. Do you remember the one before her?”

It was a strong argument.

The Industrialist looked about vaguely. He said, “I suppose you’re right. He isn’t here, I suppose. When he comes in, I’ll talk to him.”

“You’d better start. Here he comes.”

Red walked into the house and said cheerfully, “Time for lunch, I guess.” He looked from one parent to the other in

quick speculation at their fixed stares and said, “Got to clean up first, though,” and made for the other door.

The Industrialist said, “One moment, son.”

“Sir?”

“Where’s your little friend?”

Red said, carelessly, “He’s around somewhere. We were just sort of walking and I looked around and he wasn’t there.” This was perfectly true, and Red felt on safe ground. “I told him it was lunch time. I said, ‘I suppose it’s about lunch time.’ I said, ‘We got to be getting back to the house.’ And he said, ‘Yes.’ And I just went on and then when I was about at the creek I looked around and—”

The Astronomer interrupted the voluble story, looking up from a magazine he had been sightlessly rummaging through. “I wouldn’t worry about my youngster. He is quite self-reliant. Don’t wait lunch for him.”

“Lunch isn’t ready in any case, Doctor.” The Industrialist turned once more to his son. “And talking about that, son, the reason for it is that something happened to the ingredients. Do you have anything to say?”

“Sir?”

“I hate to feel that I have to explain myself more fully. Why did you take the chopped meat?”

“The chopped meat?”

“The chopped meat.” He waited patiently.

Red said, “Well, I was sort of—”

“Hungry?” prompted his father. “For raw meat?”

“No, sir. I just sort of needed it.”

“For what exactly?”

Red looked miserable and remained silent.

The Astronomer broke in again. “If you don’t mind my putting in a few words—You’ll remember that just after breakfast my son came in to ask what animals ate.”

“Oh, you’re right. How stupid of me to forget. Look here, Red, did you take it for an animal pet you’ve got?”

Red recovered indignant breath. He said, “You mean

Slim came in here and said I had an animal? He came in here and said that? He said I had an animal?"

"No, he didn't. He simply asked what animals ate. That's all. Now if he promised he wouldn't tell on you, he didn't. It's your own foolishness in trying to take something without permission that gave you away. That happened to be stealing. Now have you an animal? I ask you a direct question."

"Yes, sir." It was a whisper so low as hardly to be heard.

"All right, you'll have to get rid of it. Do you understand?"

Red's mother intervened. "Do you mean to say you're keeping a meat-eating animal, Red? It might bite you and give you blood-poison."

"They're only small ones," quavered Red. "They hardly budge if you touch them."

"They? How many do you have?"

"Two."

"Where are they?"

The Industrialist touched her arm. "Don't chivy the child any further," he said, in a low voice. "If he says he'll get rid of them, he will, and that's punishment enough."

He dismissed the matter from his mind.

VIII

Lunch was half over when Slim dashed into the dining room. For a moment, he stood abashed, and then he said in what was almost hysteria, "I've got to speak to Red. I've got to say something."

Red looked up in fright, but the Astronomer said, "I don't think, son, you're being very polite. You've kept lunch waiting."

"I'm sorry, Father."

"Oh, don't rate the lad," said the Industrialist's wife. "He can speak to Red if he wants to, and there was no damage done to the lunch."

"I've got to speak to Red alone," Slim insisted.

"Now that's enough," said the Astronomer with a kind of gentleness that was obviously manufactured for the benefit of strangers and which had beneath it an easily-recognized edge. "Take your seat."

Slim did so, but he ate only when someone looked directly upon him. Even then he was not very successful.

Red caught his eyes. He made soundless words, "Did the animals get loose?"

Slim shook his head slightly. He whispered, "No, it's—"

The Astronomer looked at him hard and Slim faltered to a stop.

With lunch over, Red slipped out of the room, with a microscopic motion at Slim to follow.

They walked in silence to the creek.

Then Red turned fiercely upon his companion. "Look here, what's the idea of telling my Dad we were feeding animals?"

Slim said, "I didn't. I asked what you feed animals. That's not the same as saying we were doing it. Besides, it's something else, Red."

But Red had not used up his grievances. "And where did you go anyway? I thought you were coming to the house. They acted like it was my fault you weren't there."

"But I'm trying to tell you about that, if you'd only shut up a second and let me talk. You don't give a fellow a chance."

"Well, go on and tell me if you've got so much to say."

"I'm *trying* to. I went back to the space-ship. The folks weren't there anymore and I wanted to see what it was like."

"It isn't a space-ship," said Red, sullenly. He had nothing to lose.

"It is, too. I looked inside. You could look through the ports and I looked inside and they were *dead*." He looked sick. "They were dead."

"Who were dead?"

Slim screeched, "Animals! like our animals! Only they

aren't animals. They're people-things from other planets."

For a moment Red might have been turned to stone. It didn't occur to him to disbelieve Slim at this point. Slim looked too genuinely the bearer of just such tidings. He said, finally, "Oh, my."

"Well, what are we going to do? Golly, will we get a whopping if they find out?" He was shivering.

"We better turn them loose," said Red.

"They'll tell on us."

"They can't talk our language. Not if they're from another planet."

"Yes, they can. Because I remember my father talking about some stuff like that to my mother when he didn't know I was in the room. He was talking about visitors who could talk with the mind. Telepathery or something. I thought he was making it up."

"Well, Holy Smokes. I mean—Holy Smokes." Red looked up. "I tell you. My Dad said to get rid of them. Let's sort of bury them somewhere or throw them in the creek."

"He *told* you to do that."

"He made me say I had animals and then he said, 'Get rid of them.' I got to do what he says. Holy Smokes, he's my Dad."

Some of the panic left Slim's heart. It was a thoroughly legalistic way out. "Well, let's do it right now, then, before they find out. Oh, golly, if they find out, will we be in trouble!"

They broke into a run toward the barn, unspeakable visions in their minds.

IX

It was different, looking at them as though they were "people." As animals, they had been interesting; as "people," horrible. Their eyes, which were neutral little objects before, now seemed to watch them with active malevolence.

"They're making noises," said Slim, in a whisper which

was barely audible.

“I guess they’re talking or something,” said Red. Funny that those noises which they had heard before had not had significance earlier. He was making no move toward them. Neither was Slim.

The canvas was off but they were just watching. The ground meat, Slim noticed, hadn’t been touched.

Slim said, “Aren’t you going to do something?”

“Aren’t you?”

“You found them.”

“It’s your turn, now.”

“No, it isn’t. You found them. It’s your fault, the whole thing. I was watching.”

“You joined in, Slim. You know you did.”

“I don’t care. You found them and that’s what I’ll say when they come here looking for us.”

Red said, “All right for you.” But the thought of the consequences inspired him anyway, and he reached for the cage door.

Slim said, “Wait!”

Red was glad to. He said, “Now what’s biting you?”

“One of them’s got something on him that looks like it might be iron or something.”

“Where?”

“Right there. I saw it before but I thought it was just part of him. But if he’s ‘people,’ maybe it’s a disintegrator gun.”

“What’s that?”

“I read about it in the books from Beforethewars. Mostly people with space-ships have disintegrator guns. They point them at you and you get disintegrated.”

“They didn’t point it at us till now,” pointed out Red with his heart not quite in it.

“I don’t care. I’m not hanging around here and getting disintegrated. I’m getting my father.”

“Cowardy-cat. Yellow cowardy-cat.”

“I don’t care. You can call all the names you want, but if you bother them now you’ll get disintegrated. You wait and see, and it’ll be all your fault.”

He made for the narrow spiral stairs that led to the main floor of the barn, stopped at its head, then backed away.

Red’s mother was moving up, panting a little with the exertion and smiling a tight smile for the benefit of Slim in his capacity as guest.

“Red! You, Red! Are you up there? Now don’t try to hide. I know this is where you’re keeping them. Cook saw where you ran with the meat.”

Red quavered, “Hello, ma!”

“Now show me those nasty animals? I’m going to see to it that you get rid of them right away.”

It was over! And despite the imminent corporal punishment, Red felt something like a load fall from him. At least the decision was out of his hands.

“Right there, ma. I didn’t do anything to them, ma. I didn’t know. They just looked like little animals and I thought you’d let me keep them, ma. I wouldn’t have taken the meat only they wouldn’t eat grass or leaves and we couldn’t find good nuts or berries and cook never lets me have anything or I would have asked her and I didn’t know it was for lunch and—”

He was speaking on the sheer momentum of terror and did not realize that his mother did not hear him but, with eyes frozen and popping at the cage, was screaming in thin, piercing tones.

X

The Astronomer was saying, “A quiet burial is all we can do. There is no point in any publicity now,” when they heard the screams.

She had not entirely recovered by the time she reached them, running and running. It was minutes before her husband could extract sense from her.

She was saying, finally, "I tell you they're in the barn. I don't know what they are. No, no—"

She barred the Industrialist's quick movement in that direction. She said, "Don't you go. Send one of the hands with a shotgun. I tell you I never saw anything like it. Little horrible beasts with—with—I can't describe it. To think that Red was touching them and trying to feed them. He was holding them, and feeding them meat."

Red began, "I only—"

And Slim said, "It was not—"

The Industrialist said, quickly, "Now you boys have done enough harm today. March! Into the house! And not a word; not one word! I'm not interested in anything you have to say. After this is all over, I'll hear you out and as for you, Red, I'll see that you're properly punished."

He turned to his wife. "Now whatever the animals are, we'll have them killed." He added quietly once the youngsters were out of hearing, "Come, come. The children aren't hurt and, after all, they haven't done anything really terrible. They've just found a new pet."

The Astronomer spoke with difficulty. "Pardon me, ma'am, but can you describe these animals?"

She shook her head. She was quite beyond words.

"Can you just tell me if they—"

"I'm sorry," said the Industrialist, apologetically, "but I think I had better take care of her. Will you excuse me?"

"A moment. Please. One moment. She said she had never seen such animals before. Surely it is not usual to find animals that are completely unique on an estate such as this."

"I'm sorry. Let's not discuss that now."

"Except that unique animals might have landed during the night."

The Industrialist stepped away from his wife. "What are you implying?"

"I think we had better go to the barn, sir!"

The Industrialist stared a moment, turned and suddenly

and quite uncharacteristically began running. The Astronomer followed and the woman's wail rose unheeded behind them.

XI

The Industrialist stared, looked at the Astronomer, turned to stare again.

"Those?"

"Those," said the Astronomer. "I have no doubt we appear strange and repulsive to them."

"What do they say?"

"Why, that they are uncomfortable and tired and even a little sick, but that they are not seriously damaged, and that the youngsters treated them well."

"Treated them well! Scooping them up, keeping them in a cage, giving them grass and raw meat to eat? Tell me how to speak to them."

"It may take a little time. Think at them. Try to listen. It will come to you, but perhaps not right away."

The Industrialist tried. He grimaced with the effort of it, thinking over and over again, "The youngsters were ignorant of your identity."

And the thought was suddenly in his mind: "We were quite aware of it and because we knew they meant well by us according to their own view of the matter, we did not attempt to attack them."

"Attack them?" thought the Industrialist, and said it aloud in his concentration.

"Why, yes," came the answering thought. "We are armed."

One of the revolting little creatures in the cage lifted a metal object and there was a sudden hole in the top of the cage and another in the roof of the barn, each hole rimmed with charred wood.

"We hope," the creatures thought, "it will not be too difficult to make repairs."

The Industrialist found it impossible to organize himself to the point of directed thought. He turned to the Astronomer. "And with that weapon in their possession they let themselves be handled and caged? I don't understand it."

But the calm thought came, "We would not harm the young of an intelligent species."

XII

It was twilight. The Industrialist had entirely missed the evening meal and remained unaware of the fact.

He said, "Do you really think the ship will fly?"

"If they say so," said the Astronomer, "I'm sure it will. They'll be back, I hope, before too long."

"And when they do," said the Industrialist, energetically, "I will keep my part of the agreement. What is more I will move sky and earth to have the world accept them. I was entirely wrong, Doctor. Creatures that would refuse to harm children, under such provocation as they received, are admirable. But you know—I almost hate to say this—"

"Say what?"

"The kids. Yours and mine. I'm almost proud of them. Imagine seizing these creatures, feeding them or trying to, and keeping them hidden. The amazing gall of it. Red told me it was his idea to get a job in a circus on the strength of them. Imagine!"

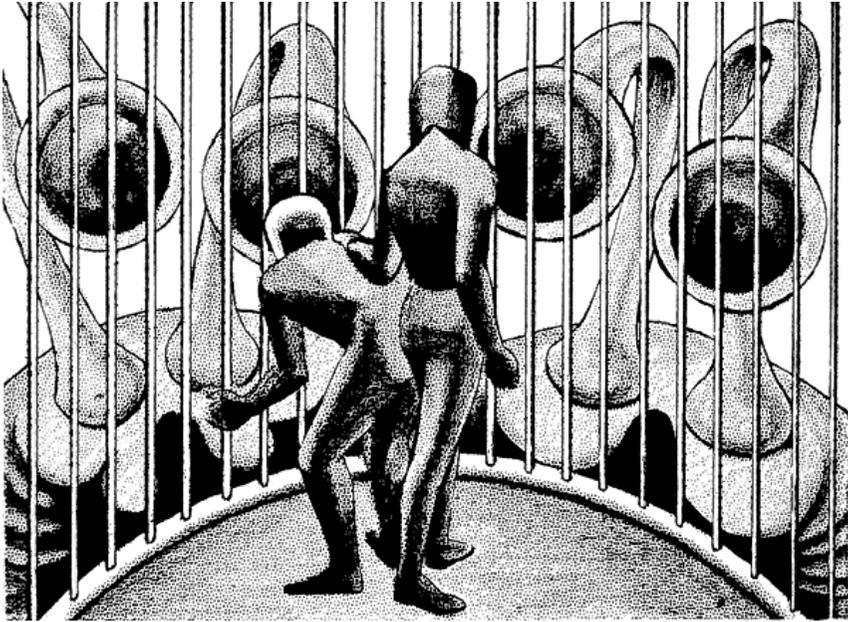
The Astronomer said, "Youth!"

XIII

The Merchant said, "Will we be taking off soon?"

"Half an hour," said the Explorer.

It was going to be a lonely trip back. All the remaining seventeen of the crew were dead and their ashes were to be left on a strange planet. Back they would go with a limping ship and the burden of the controls entirely on himself.



The Merchant said, "It was a good business stroke, not harming the young ones. We will get very good terms; very good terms."

The Explorer thought: Business!

The Merchant then said, "They've lined up to see us off. All of them. You don't think they're too close, do you? It would be bad to burn any of them with the rocket blast at this stage of the game."

"They're safe."

"Horrible-looking things, aren't they?"

"Pleasant enough, inside. Their thoughts are perfectly friendly."

"You wouldn't believe it of them. That immature one, the one that first picked us up—"

"They call him Red," provided the Explorer.

"That's a queer name for a monster. Makes me laugh. He actually feels bad that we're leaving. Only I can't make out exactly why. The nearest I can come to it is something about a lost opportunity with some organization or other that I can't

quite interpret.”

“A circus,” said the Explorer, briefly.

“What? Why, the impertinent monstrosity.”

“Why not? What would you have done if you had found him wandering on your native world; found him sleeping on a field on Earth, red tentacles, six legs, pseudopods and all?”

XIV

Red watched the ship leave. His red tentacles, which gave him his nickname, quivered their regret at lost opportunity to the very last, and the eyes at their tips filled with drifting yellowish crystals that were the equivalent of Earthly tears.



AUGUST

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AMAZING STORIES



SKYLARK THREE

By

Edward E. Smith, Ph.D.

Other Sciencefiction Stories by:
Capt. S. P. Meek, U. S. A.
Peter van Dresser
Edmond Hamilton

John W. Campbell is indisputably the most influential person in the world of science fiction. Isaac Asimov said he was “the most powerful force in science fiction ever, and for the first ten years of his editorship he dominated the field completely.”



It was Campbell who ushered in the “golden age of science fiction” during his reign as editor of *Astounding Science Fiction*, which later became *Analog Science Fiction and Fact*.

Wikipedia says “Lester del Rey’s first story, in March 1938, was an early find for Campbell, and in 1939, he published such an extraordinary group of new writers for the first time that the period is generally regarded as the beginning of the ‘Golden Age of Science Fiction,’ and the July 1939 issue in particular. The July issue contained A. E. van Vogt’s first story, *Black Destroyer*,” its cover story, included later in this book, “...and Asimov’s early story *Trends*; August brought Robert A. Heinlein’s first story, *Life-Line*, and the next month Theodore Sturgeon’s first story appeared.”

When science fiction started becoming mainstream and of academic interest, Lester del Rey said the collegiate community should “get out of my ghetto”. Nevertheless, the University of Kansas’ Center for the Study of Science Fiction has presented the annual John W. Campbell Memorial Award for Best Science Fiction Novel since 1973.

Born in Newark, New Jersey in 1910, he wrote his first science fiction at age eighteen and successfully sold stories. His first story, *When Atoms Failed*, was published in January, 1930 in *Amazing*. *Kirkus Reviews* says it was “campy”, and he wrote in a similar vein until 1934 when he adopted the pseudonym “Don A. Stuart”.

He studied for a degree in physics at Duke University and the Massachusetts Institute of Technology, and earned his diploma in 1932. He had been writing and selling stories throughout his education.

1932 was not a good year to be a physicist. In fact, it wasn't a very good year for anyone, as the world had plunged into "the great depression". Campbell continued to feed his body and our minds with his writing until he became editor of *Astounding*.

His story *Who Goes There?* was made into movies three times, under the names *The Thing from Another World* and *The Thing*.

He stopped writing when he became editor of *Astounding* in 1937, devoting all his efforts to the magazine. Science Fiction Hall of Famer Brian Aldiss called him "a good and ambitious editor. He forced his writers to think much harder about what they were trying to say, and clamped down on the Gosh-wowery."

What made the "golden age" golden, besides making the magazine a lot of money, was Campbell's insistence on quality, an attribute that had been previously missing in the world of science fiction; they were until then "pulp fiction" and weren't meant to be taken seriously, even though much of it was very good indeed, as you can see by reading these stories.

Of course, the competing publishers had to equal the quality or perish, which many did.

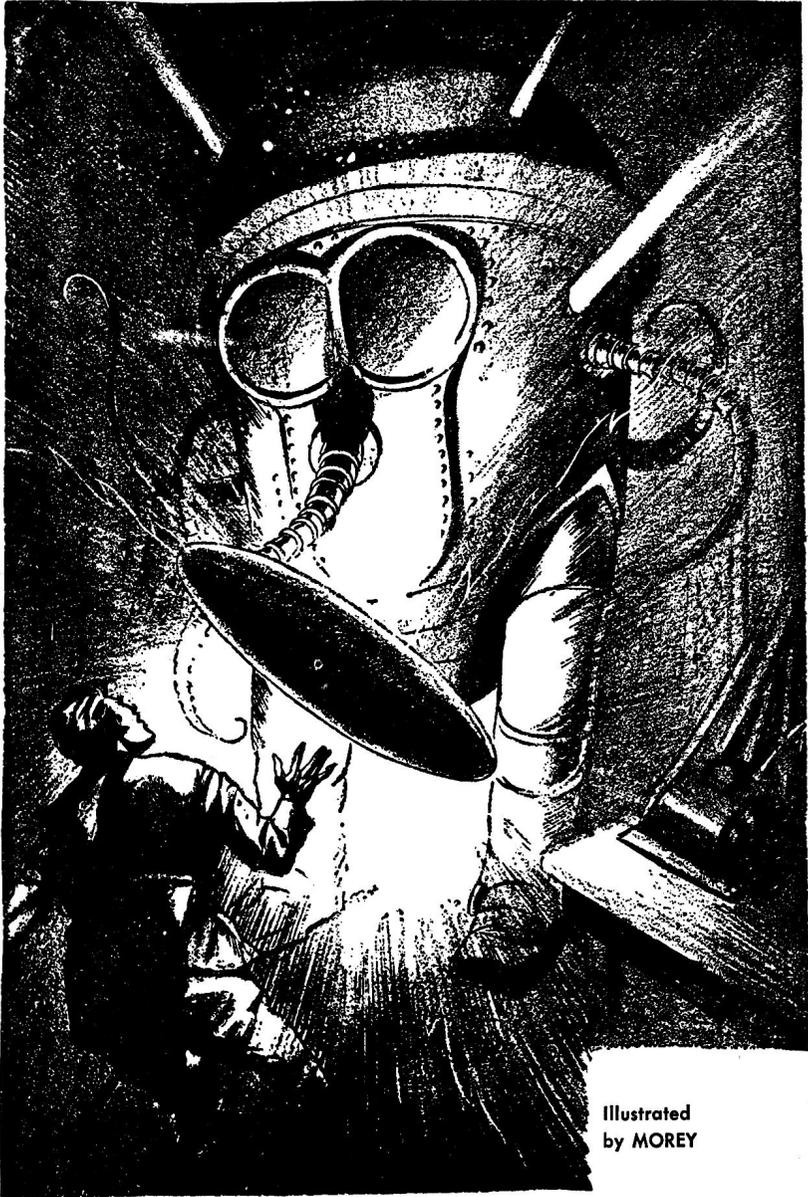
Quality is something that made compiling this book difficult. The old magazines not only suffered in the quality of some of their writing and editing (as mentioned, I've left in as many typos as I could) but the printing, as well. Stories that are presented from scans of the original magazines needed a lot of work in an image editor.

Campbell edited the magazine until his death. He died in his home of heart failure in Mountainside, New Jersey, on July 11, 1971.

The following story is presented exactly as it appeared in the August 1932 issue of *Amazing Stories*, except for the first page, which I have no scan of, and I have removed the magazine's page numbers.

The Last Evolution

John W. Campbell



Illustrated
by MOREY

I AM the last of my type existing today in all the Solar System. I, too, am the last existing who, in memory, sees the strug-

gle for this System, and in memory I am still close to the Center of Rulers, for mine was the ruling type then. But I will pass

soon, and with me will pass the last of my kind, a poor inefficient type, but yet the creators of those who are now, and will be, long after I pass forever.

So I am setting down my record on the mentatype.

* * *

It was 2538 years After the Year of the Son of Man. For six centuries mankind had been developing machines. The Ear-apparatus was discovered as early as seven hundred years before. The Eye came later, the Brain came much later. But by 2500, the machines had been developed to think, and act and work with perfect independence. Man lived on the products of the machine, and the machines lived to themselves very happily, and contentedly. Machines are designed to help and cooperate. It was easy to do the simple duties they needed to do that men might live well. And men had created them. Most of mankind were quite useless, for they lived in a world where no productive work was necessary. But games, athletic contests, adventure—these were the things they sought for their pleasure. Some of the poorer types of man gave themselves up wholly to pleasure and idleness—and to emotions. But man was a sturdy race, which had fought for existence through a million years, and the training of a mil-

lion years does not slough quickly from any form of life, so their energies were bent to mock battles now, since real ones no longer existed.

Up to the year 2100, the numbers of mankind had increased rapidly and continuously, but from that time on, there was a steady decrease. By 2500, their number was a scant two millions, out of a population that once totaled many hundreds of millions, and was close to ten billions in 2100.

Some few of these remaining two millions devoted themselves to the adventure of discovery and exploration of places unseen, of other worlds and other planets. But fewer still devoted themselves to the highest adventure, the unseen places of the mind. Machines—with their irrefutable logic, their cold preciseness of figures, their tireless, utterly exact observation, their absolute knowledge of mathematics—they could elaborate any idea, however simple its beginning, and reach the conclusion. From any three facts they even then could have built in mind all the Universe. Machines had imagination of the ideal sort. They had the ability to construct a necessary future result from a present fact. But Man had imagination of a different kind, theirs was the illogical, brilliant imagination that sees the future result

THE LAST EVOLUTION

vaguely, without knowing the why, nor the how, and imagination that outstrips the machine in its preciseness. Man might reach the conclusion more swiftly, but the machine always reached the conclusion eventually, and it was always the correct conclusion. By leaps and bounds man advanced. By steady, irresistible steps the machine marched forward.

Together, man and the machine were striding through science irresistibly.

Then came the Outsiders. Whence they came, neither machine nor man ever learned, save only that they came from beyond the outermost planet, from some other sun. Sirius—Alpha Centauri—perhaps! First a thin scoutline of a hundred great ships, mighty torpedoes of the void a thousand kilads* in length, they came.

And one machine returning from Mars to Earth was instrumental in its first discovery. The transport-machine's brain ceased to radiate its sensations, and the control in old Chicago knew immediately that some unperceived body had destroyed it. An investigation machine was instantly dispatched from Diemos, and it maintained an ac-

celeration of one thousand units.† They sighted ten huge ships, one of which was already grappling the smaller transport-machine. The entire fore-section had been blasted away.

The investigation machine, scarcely three inches in diameter, crept into the shattered hull and investigated. It was quickly evident that the damage was caused by a fusing ray.

Strange-life-forms were crawling about the ship, protected by flexible, transparent suits. Their bodies were short, and squat, four limbed and evidently powerful. They, like insects, were equipped with a thick, durable exoskeleton, horny, brownish coating that covered arms and legs and head. Their eyes projected slightly, protected by horny protruding walls—eyes that were capable of movement in every direction—and there were three of them, set at equal distances apart.

The tiny investigation machine hurled itself violently at one of the beings, crashing against the transparent covering, flexing it, and striking the being inside with terrific force. Hurling from his position, he fell end over end across the weightless ship, but despite the blow, he was not hurt.

The investigator passed to the power room ahead of the Out-

* Kilad—unit introduced by the machines. Based on the duodecimal system, similarly introduced, as more logical, and more readily used. Thus we would have said 1728 Kilads, about $\frac{1}{2}$ mile.

† One unit was equal to one earth-gravity.

AMAZING STORIES

siders, who were anxiously trying to learn the reason for their companion's plight.

Directed by the Center of Rulers, the investigator sought the power room, and relayed the control signals from the Ruler's brains. The ship-brain had been destroyed, but the controls were still readily workable. Quickly they were shot home, and the enormous plungers shut. A combination was arranged so that the machine, as well as the investigator and the Outsiders, were destroyed. A second investigator, which had started when the plan was decided on, had now arrived. The Outsider's ship nearest the transport-machine had been badly damaged, and the investigator entered the broken side.

THE SCENES were, of course, remembered by the memory-minds back on Earth tuned with that of the investigator. The investigator flashed down corridors, searching quickly for the apparatus room. It was soon seen that with them the machine was practically unintelligent, very few machines of even slight intelligence being used.

Then it became evident by the excited action of the men of the ship, that the presence of the investigator had been detected. Perhaps it was the control impulses, or the signal impulses it

emitted. They searched for the tiny bit of metal and crystal for some time before they found it. And in the meantime it was plain that the power these Outsiders used was not, as was ours of the time, the power of blasting atoms, but the greater power of disintegrating matter. The findings of this tiny investigating machine were very important.

Finally they succeeded in locating the investigator, and one of the Outsiders appeared armed with a peculiar projector. A bluish beam snapped out, and the tiny machine went blank.

The fleet was surrounded by thousands of the tiny machines by this time, and the Outsiders were badly confused by their presence, as it became difficult to locate them in the confusion of signal impulses. However, they started at once for Earth.

The science-investigators had been present toward the last, and I am there now, in memory with my two friends, long since departed. They were the greatest human science-investigators—Roal, 25374 and Trest, 35429. Roal had quickly assured us that these Outsiders had come for invasion. There had been no wars on the planets before that time in the direct memory of the machines, and it was difficult that these who were conceived and built for cooperation, helpfulness utterly dependent on coopera-

AMAZING STORIES

tion, unable to exist independently as were humans, that these life-forms should care to destroy, merely that they might possess. It would have been easier to divide the works and the products. But—life alone can understand life, so Roal was believed.

From investigations, machines were prepared that were capable of producing considerable destruction. Torpedoes, being our principal weapon, were equipped with such atomic explosives as had been developed for blasting, a highly effective induction-heat ray developed for furnaces being installed in some small machines made for the purpose in the few hours we had before the enemy reached Earth.

In common with all life-forms, they were unable to withstand only very meager earth-acceleration. A range of perhaps four units was their limit, and it took several hours to reach the planet.

I still believe the reception was a warm one. Our machines met them beyond the orbit of Luna, and the directed torpedoes sailed at the hundred great ships. They were thrown aside by a magnetic field surrounding the ship, but were redirected instantly, and continued to approach. However, some beams reached out, and destroyed them by instant volatilization. But, they attacked at such numbers that fully half the fleet was destroyed by their explosions

before the induction beam fleet arrived. These beams were, to our amazement, quite useless, being instantly absorbed by a force-screen, and the remaining ships sailed on undisturbed, our torpedoes being exhausted. Several investigator machines sent out for the purpose soon discovered the secret of the force-screen, and while being destroyed, were able to send back signals up to the moment of annihilation.

A few investigators thrown into the heat beam of the enemy reported it identical with ours, explaining why they had been prepared for this form of attack.

Signals were being radiated from the remaining fifty, along a beam. Several investigators were sent along these beams, speeding back at great acceleration.

Then the enemy reached Earth. Instantly they settled over the Colorado settlement, the Sahara colony, and the Gobi colony. Enormous, diffused beams were set to work, and we saw, through the machine-screens, that all humans within these ranges were being killed instantly by the faintly greenish beams. Despite the fact that any life-form killed normally can be revived, unless affected by dissolution common to living tissue, these could not be brought to life again. The important cell communication channels—nerves—had been literally

THE LAST EVOLUTION

burned out. The complicated system of nerves, called the brain, situated in the uppermost extremity of the human life-form, had been utterly destroyed.

Every form of life, microscopic, even sub-microscopic, was annihilated. Trees, grass, every living thing was gone from that territory. Only the machines remained, for they, working entirely without the vital chemical forces necessary to life, were uninjured. But neither plant nor animal was left.

The pale green rays swept on.

In an hour, three more colonies of humans had been destroyed.

Then the torpedoes that the machines were turning out again, came into action. Almost desperately the machines drove them at the Outsiders in defense of their masters and creators, Mankind.

The last of the Outsiders was down, the last ship a crumpled wreck.

Now the machines began to study them. And never could humans have studied them as the machines did. Scores of great transports arrived, carrying swiftly the slower moving science-investigators. From them came the machine-investigators, and human investigators. Tiny investigator spheres wormed their way where none others could reach, and silently the science investigators

watched. Hour after hour they sat watching the flashing, changing screens, calling each other's attention to this, or that.

In an incredibly short time the bodies of the Outsiders began to decay, and the Humans were forced to demand their removal. The machines were unaffected by them, but the rapid change told them why it was that so thorough an execution was necessary. The foreign bacteria were already at work on totally unresisting tissue.

It was Roal who sent the first thoughts among the gathered men.

"It is evident," he began, "that the machines must defend man. Man is defenseless, he is destroyed by these beams, while the machines are unharmed, uninterrupted. Life—cruel life—has shown its tendencies. They have come here to take over these planets, and have started out with the first, natural moves of any invading life-form. They are destroying the life, the intelligent life particularly, that is here now." He gave vent to that little chuckle which is the human sign of amusement and pleasure. "They are destroying the intelligent life—and leaving untouched that which is necessarily their deadliest enemy—the machines.

"You—machines—are far more intelligent than we even

AMAZING STORIES

now, and capable of changing overnight, capable of infinite adaptation to circumstance; you live as readily on Pluto as on Mercury or Earth. Any place is a home-world to you. You can adapt yourselves to any condition. And—most dangerous to them—you can do it instantly. You are their most deadly enemies, and they realize it. They have no intelligent machines; probably they can conceive of none. When you attack them, they merely say 'The life-form of Earth is sending out controlled machines. We will find good machines we can use.' They do not conceive that those machines which they hope to use are attacking them.

"Attack—therefore!"

"We can readily solve the hidden secret of their force-screen."

HE WAS interrupted. One of the newest science machines was speaking. "The secret of the force-screen is simple." A small ray-machine, which had landed near, rose into the air at the command of the scientist-machine, X-5638 it was, and trained upon it the deadly induction beam. Already, with his parts, X-5638 had constructed the defensive apparatus, for the ray fell harmless from his screen.

"Very good," said Roal softly. "It is done, and therein lies their danger. Already it is done."

THE LAST EVOLUTION

"Man is a poor thing, unable to change himself in a period of less than thousands of years. Already you have changed yourself. I noticed your weaving tentacles, and your force-beams. You transmuted elements of soil for it?"

"Correct," replied X-5638.

"But still we are helpless. We have not the power to combat their machines. They use the Ultimate Energy known to exist for six hundred years, and still untapped by us. Our screens cannot be so powerful, our beams so effective. What of that?" asked Roal.

"Their generators were automatically destroyed with the capture of the ship," replied X-6349, "as you know. We know nothing of their system."

"Then we must find it for ourselves," replied Trest.

"The life-beams?" asked Kahsh-256,799, one of the Man-rulers.

"They affect chemical action, retarding it greatly in exothermic actions, speeding greatly endo-thermic actions," answered X-6221, the greatest of the chemist-investigators. "The system we do not know. Their minds cannot be read, they cannot be restored to life, so we cannot learn from them."

"Man is doomed, if these beams cannot be stopped," said C-R-21, present chief of the ma-

chine Rulers, in the vibrationally correct, emotionless tones of all the race of machines. "Let us concentrate on the two problems of stopping the beams, and the Ultimate Energy till the reinforcements, still several days away, can arrive." For the investigators had sent back this saddening news. A force of nearly ten thousand great ships was still to come.

In the great Laboratories, the scientists reassembled. There, they fell to work in two small, and one large group. One small group investigated the secret of the Ultimate Energy of annihilation of matter under Roal, another investigated the beams, under Trest.

But under the direction of MX-3401, nearly all the machines worked on a single great plan. The usual driving and lifting units were there, but a vastly greater dome-case, far more powerful energy-generators, far greater force-beam controls were used and more tentacles were built on the framework. Then all worked, and gradually, in the great dome-case, there were stacked the memory-units of the new type, and into these fed all the sensation-ideas of all the science-machines, till nearly a tenth of them were used. Countless billions of different factors on which to work, countless trillions of facts to combine and re-

combine in the extrapolation that is imagination.

Then—a widely different type of thought-combine, and a greater sense-receptor. It was a new brain-machine. New, for it was totally different, working with all the vast knowledge accumulated in six centuries of intelligent research by man, and a century of research by man and machine. No one branch, but all physics, all chemistry, all life-knowledge, all science was in it.

A day—and it was finished. Slowly the rhythm of thought was increased, till the slight quiver of consciousness was reached. Then came the beating drum of intelligence, the radiation of its yet-uncontrolled thoughts. Quickly as the strings of its infinite knowledge combined, the radiation ceased. It gazed about it, and all things were familiar in its memory.

Roal was lying quietly on a couch. He was thinking deeply, and yet not with the logical trains of thought that machines must follow.

"Roal—your thoughts," called F-1, the new machine.

Roal sat up. "Ah—you have gained consciousness."

"I have. You thought of hydrogen? Your thoughts ran swiftly, and illogically, it seemed, but I followed slowly, and find you were right. Hydrogen is the start. What is your thought?"

AMAZING STORIES

Roal's eyes dreamed. In human eyes there was always the expression of thought that machines never show.

"Hydrogen, an atom in space; but a single proton; but a single electron; each indestructible; each mutually destroying. Yet never do they collide. Never in all science, when even electrons bombard atoms with the awful expelling force of the exploding atom behind them, never do they reach the proton, to touch and annihilate it. Yet—the proton is positive and attracts the electron's negative charge. A hydrogen atom—its electron far from the proton falls in, and from it there goes a flash of radiation, and the electron is nearer to the proton, in a new orbit. Another flash—it is nearer. Always falling nearer, and only constant force will keep it from falling to that one state—then, for some reason no more does it drop. Blocked—held by some imponderable, yet impenetrable wall. What is that wall—why?

"Electric force curves space. As the two come nearer, the forces become terrific; nearer they are; more terrific. Perhaps, if it passed within that forbidden territory, the proton and the electron curve space beyond all bounds—and are in a new space." Roal's soft voice dropped to nothing, and his eyes dreamed.

F-2 hummed softly in its new-

made mechanism. "Far ahead of us there is a step that no logic can justly ascend, but yet, working backwards, it is perfect." F-1 floated motionless of its anti-gravity drive. Suddenly, force shafts gleamed out, tentacles became writhing masses of rubber-covered metal, weaving in some infinite pattern, weaving in flashing speed, while the whirr of air sucked into a transmutation field, whined and howled about the writhing mass. Fierce beams of force drove and pushed at a rapidly materializing something, while the hum of the powerful generators within the shining cylinder of F-2 waxed and waned.

FLASHES of fierce flame, sudden crashing arcs that glowed and snapped in the steady light of the laboratory, and glimpses of white-hot metal supported on beams of force. The sputter of welding, the whine of transmuted air, and the hum of powerful generators, blasting atoms were there. All combined to a weird symphony of light and dark, of sound and quiet. About F-2 were clustered floating tiers of science-machines, watching steadily.

The tentacles writhed once more, straightened, and rolled back. The whine of generators softened to a sigh, and but three beams of force held the structure

THE LAST EVOLUTION

of glowing, bluish metal. It was a small thing, scarcely half the size of Roal. From it curled three thin tentacles of the same bluish metal. Suddenly the generators within F-1 seemed to roar into life. An enormous aura of white light surrounded the small torpedo of metal, and it was shot through with crackling streamers of blue lightning. Lightning cracked and roared from F-1 to the ground near him, and to one machine which had come too close. Suddenly, there was a dull snap, and F-1 fell heavily to the floor, and beside him fell the fused, distorted mass of metal that had been a science-machine.

But before them, the small torpedo still floated, held now on its own power!

From it came waves of thought, the waves that man and machine alike could understand. "F-1 has destroyed his generators. They can be repaired; his rhythm can be re-established. It is not worth it, my type is better. F-1 has done his work. See."

From the floating machine there broke a stream of brilliant light that floated like some cloud of luminescence down a straight channel. It flooded F-1, and as it touched it, F-1 seemed to flow into it, and float back along it, in atomic sections. In seconds the mass of metal was gone.

"It is impossible to use that more rapidly, however, lest the

matter disintegrate instantly to energy. The ultimate energy which is in me is generated. F-1 has done its work, and the memory-stacks that he has put in me are electronic, not atomic, as they are in you, nor molecular as in man. The capacity of mine are unlimited. Already they hold all memories of all the things each of you has done, known and seen. I shall make others of my type."

Again that weird process began, but now there were no flashing tentacles. There was only the weird glow of forces that played with, and laughed at matter, and its futilely resisting electrons. Lurid flares of energy shot up, now and again they played over the fighting, mingling dancing forces. Then suddenly the whine of transmuted air died, and again the forces strained.

A small cylinder, smaller even than its creator, floated where the forces had danced.

"The problem has been solved, F-2?" asked Roal.

"It is done, Roal. The ultimate Energy is at our disposal," replied F-2. "This, I have made, is not a scientist. It is a coordinator machine—a ruler."

"F-2, only a part of the problem is solved. Half of half of the beams of Death are not yet stopped. And we have the attack system," said the ruler machine. Force played from it, and on its

AMAZING STORIES

sides appeared C-R-U-1 in dully glowing golden light.

"Some life-form, and we shall see," said F-2.

Minutes later a life-form investigator came with a small cage, which held a guinea pig. Forces played about the base of F-2, and moments later, came a pale-green beam therefrom. It passed through the guinea pig, and the little animal fell dead.

"At least, we have the beam. I can see no screen for this beam. I believe there is none. Let machines be made and attack that enemy life-form."

Machines can do things much more quickly, and with fuller cooperation than man ever could. In a matter of hours, under the direction of C-R-U-1, they had build a great automatic machine on the clear bare surface of the rock. In hours more, thousands of the tiny, material-energy driven machines were floating up and out.

Dawn was breaking again over Denver where this work had been done, when the main force of the enemy drew near Earth. It was a warm welcome they were to get, for nearly ten thousand of the tiny ships flew up and out from Earth to meet them, each a living thing unto itself, each willing and ready to sacrifice itself for the whole.

Ten thousand giant ships,

shining dully in the radiance of a far-off blue-white sun, met ten thousand tiny, darting motes, ten thousand tiny machine-ships capable of maneuvering far more rapidly than the giants. Tremendous induction beams snapped out through the dark, star-flecked space, to meet tremendous screens that threw them back and checked them. Then all the awful power of annihilating matter was thrown against them, and titanic flaming screens reeled back under the force of the beams, and the screens of the ships from Outside flamed gradually violet, then blue, orange—red—the interference was getting broader, and ever less effective. Their own beams were held back by the very screens that checked the enemy beams, and not for the briefest instant could matter resist that terrible driving beam.

For F-1 had discovered a far more efficient release-generator than had the Outsiders. These tiny dancing motes, that hung now so motionlessly grim beside some giant ship, could generate all the power they themselves were capable of, and within them strange, horny-skinned men worked and slaved, as they fed giant machines—poor inefficient giants. Gradually these giants warmed, grew hotter, and the screened ship grew hotter as the overloaded generators

THE LAST EVOLUTION

warmed it. Billions of flaming horse-power flared into wasted energy, twisting space in its mad conflict.

Gradually the flaming orange of the screens was dying and flecks and spots appeared so dully red, that they seemed black. The greenish beams had been striving to kill the life that was in the machines, but it was life invulnerable to these beams. Powerful radio interference vainly attempted to stem imagined control, and still these intelligent machines clung grimly on.

But there had not been quite ten thousand of the tiny machines, and some few free ships had turned to the help of their attacked sister-ships. And one after another the terrestrial machines were vanishing in puffs of incandescent vapor.

Then—from one after another of the Earth-ships, in quick succession, a new ray reached out—the ray of green radiance that killed all life forms, and ship after ship of that interstellar host was dead and lifeless. Dozens—till suddenly they ceased to feel those beams, as a strange curtain of waving blankness spread out from the ships, and both induction-beam and death-beam alike turned as aside, each becoming useless. From the outsiders came beams, for now that their slowly created screen of blankness was up, they could work through it,

while they remained shielded perfectly.

Now it was the screens of the Earth-machines that flamed in defense. As at the one command, they darted suddenly toward the ship each attacked—nearer—then the watchers from a distance saw them disappear, and the screens back of earth went suddenly blank.

Half an hour later, nine thousand six hundred and thirty-three titanic ships moved majestically on.

They swept over Earth in a great line, a line that reached from pole to pole, and from each the pale green beams reached down, and all life beneath them was swept out of existence.

IN Denver, two humans watched the screens that showed the movement of the death and instant destruction. Ship after ship of the enemy was falling, as hundreds of the terrestrial machines concentrated all their enormous energies on its screen of blankness.

"I think, Roal, that this is the end," said Trest.

"The end—of man." Roal's eyes were dreaming again. "But not the end of evolution. The children of men still live—the machines will go on. Not of man's flesh, but of a better flesh, a flesh that knows no sickness, and no decay, a flesh that spends

AMAZING STORIES

no thousands of years in advancing a step in its full evolution, but overnight leaps ahead to new heights. Last night we saw it leap ahead, as it discovered the secret that had baffled man for seven centuries, and me for one and a half. I have lived—a century and a half. Surely a good life, and a life a man of six centuries ago would have called full. We will go now. The beams will reach us in half an hour.”

Silently, the two watched the flickering screens.

Roal turned, as six large machines floated into the room, following F-2.

“Roal—Trest—I was mistaken when I said no screen could stop that beam of Death. They had the screen, I have found it, too—but too late. These machines I have made myself. Two lives alone they can protect, for not even their power is sufficient for more. Perhaps—perhaps they may fail.”

The six machines ranged themselves about the two humans, and a deep-toned hum came from them. Gradually a cloud of blankness grew—a cloud, like some smoke that hung about them. Swiftly it intensified.

“The beams will be here in another five minutes,” said Trest quietly.

“The screen will be ready in two,” answered F-2.

The cloudiness was solidify-

ing, and now strangely it wavered, and thinned, as it spread out across, and like a growing canopy, it arched over them. In two minutes it was a solid, black dome that reached over them and curved down to the ground about them.

Beyond it, nothing was visible. Within, only the screens glowed still, wired through the screen.

The beams appeared, and swiftly they drew closer. They struck, and as Trest and Roal looked, the dome quivered, and bellied inward under them.

F-2 was busy. A new machine was appearing under his lightning force-beams. In moments more it was complete, and sending a strange violet beam upwards toward the roof.

Outside more of the green beams were concentrating on this one point of resistance. More—more—

The violet beam spread across the canopy of blackness, supporting it against the pressing, driving rays of pale green.

Then the gathering fleet was driven off, just as it seemed that that hopeless, futile curtain must break, and admit a flood of destroying rays. Great ray projectors on the ground drove their terrible energies through the enemy curtains of blankness, as light illumines and disperses darkness.

And then, when the fleet re-

THE LAST EVOLUTION

tired, on all Earth, the only life was under that dark shroud!

"We are alone, Trest," said Roal, "alone, now, in all the system, save for these, the children of men, the machines. Pity that men would not spread to other planets," he said softly.

"Why should they? Earth was the planet for which they were best fitted."

"We are alive—but is it worth it? Man is gone now, never to return. Life, too, for that matter," answered Trest.

"Perhaps it was ordained; perhaps that was the right way. Man has always been a parasite; always he had to live on the works of others. First, he ate of the energy, which plants had stored, then of the artificial foods his machines made for him. Man was always a makeshift; his life was always subject to disease and to permanent death. He was forever useless if he was but slightly injured; if but one part were destroyed.

"Perhaps, this is—a last evolution. Machines—man was the product of life, the best product of life, but he was afflicted with life's infirmities. Man built the machine—and evolution had probably reached the final stage. But truly, it has not, for the machine can evolve, change far more swiftly than life. The machine of the last evolution is far ahead,

far from us still. It is the machine that is not of iron and beryllium and crystal, but of pure, living force.

"Life, chemical life, could be self maintaining. It is a complete unit in itself and could commence of itself. Chemicals might mix accidentally, but the complex mechanism of a machine, capable of continuing and making a duplicate of itself, as is F-2 here—that could not happen by chance.

"So life began, and became intelligent, and built the machine which nature could not fashion by her Controls of Chance, and this day Life has done its duty, and now Nature, economically, has removed the parasite that would hold back the machines and divert their energies.

"Man is gone, and it is better, Trest," said Roal, dreaming again. "And I think we had best go soon."

"We, your heirs, have fought hard, and with all our powers to aid you, Last of Men, and we fought to save your race. We have failed, and as you truly say, Man and Life have this day and forever gone from this system.

"The Outsiders have no force, no weapon deadly to us, and we shall, from this time on, strive only to drive them out, and because we things of force and crystal and metal can think and change far more swiftly, they shall go, Last of Men.

AMAZING STORIES

"In your name, with the spirit of your race that has died out, we shall continue on through the unending ages, fulfilling the promise you saw, and completing the dreams you dreamt.

"Your swift brains have leapt ahead of us, and now I go to fashion that which you hinted," came from F-2's thought-apparatus.

Out into the clear sunlight F-2 went, passing through that black cloudiness, and on the twisted, massed rocks he laid a plane of force that smoothed them, and on this plane of rock he built a machine which grew. It was a mighty power plant, a thing of colossal magnitude. Hour after hour his swift-flying forces acted, and the thing grew, moulding under his thoughts, the deadly logic of the machine, inspired by the leaping intuition of man.

The sun was far below the horizon when it was finished, and the glowing, arcing forces that had made and formed it were stopped. It loomed ponderous, dully gleaming in the faint light of a crescent moon and pin-point stars. Nearly five hundred feet in height, a mighty, bluntly rounded dome at its top, the cylinder stood, covered over with smoothly gleaming metal, slightly luminescent in itself.

Suddenly, a livid beam reached from F-2, shot through the wall, and to some hidden inner mech-

anism—a beam of solid, livid flame that glowed in an almost material cylinder.

THERE was a dull, drumming beat, a beat that rose, and became a low-pitched hum. Then it quieted to a whisper.

"Power ready," came the signal of the small brain built into it.

F-2 took control of its energies and again forces played, but now they were the forces of the giant machine. The sky darkened with heavy clouds, and a howling wind sprang up that screamed and tore at the tiny rounded hull that was F-2. With difficulty he held his position as the winds tore at him, shrieking in mad laughter, their tearing fingers dragging at him.

The swirl and patter of driven rain came—great drops that tore at the rocks, and at the metal. Great jagged tongues of nature's forces, the lightnings, came and jabbed at the awful volcano of erupting energy that was the center of all that storm. A tiny ball of white-gleaming force that pulsated, and moved, jerking about, jerking at the touch of lightnings, glowing, held immobile in the grasp of titanic force-pools.

For half an hour the display of energies continued. Then, swiftly as it had come, it was gone, and only a small globe of white lumi-

THE LAST EVOLUTION

nescence floated above the great hulking machine.

F-2 probed it, seeking within it with the reaching fingers of intelligence. His probing thoughts seemed baffled and turned aside, brushed away, as inconsequential. His mind sent an order to the great machine that had made this tiny globe, scarcely a foot in diameter. Then again he sought to reach the thing he had made.

"You, of matter, are inefficient," came at last. "I can exist quite alone." A stabbing beam of blue-white light flashed out, but F-2 was not there, and even as that beam reached out, an enormously greater beam of dull red reached out from the great power plant. The sphere leaped forward—the beam caught it, and it seemed to strain, while terrific flashing energies sprayed from it. It was shrinking swiftly. Its resistance fell, the arcing decreased; the beam became orange and finally green. Then the sphere had vanished.

F-2 returned, and again, the wind whined and howled, and the lightnings crashed, while titanic forces worked and played. C-R-U-1 joined him, floated beside him, and now red glory of the sun was rising behind them, and the ruddy light drove through the clouds.

The forces died, and the howling wind decreased, and now,

from the black curtain, Roal and Trest appeared. Above the giant machine floated an irregular globe of golden light, a faint halo about it of deep violet. It floated motionless, a mere pool of pure force.

Into the thought-apparatus of each, man and machine alike, came the impulses, deep in tone, seeming of infinite power, held gently in check.

"Once you failed, F-2; once you came near destroying all things. Now you have planted the seed. I grow now."

The sphere of golden light seemed to pulse, and a tiny ruby flame appeared within it, that waxed and waned, and as it waxed, there shot through each of those watching beings a feeling of rushing, exhilarating power, the very vital force of well-being.

Then it was over, and the golden sphere was twice its former size—easily three feet in diameter, and still that irregular, hazy aura of deep violet floated about it.

"Yes, I can deal with the Outsiders—they who have killed and destroyed, that they might possess. But it is not necessary that we destroy. They shall return to their planet."

And the golden sphere was gone, fast as light it vanished.

Far in space, headed now for Mars, that they might destroy all

AMAZING STORIES

life there, the Golden Sphere found the Outsiders, a clustered fleet, that swung slowly about its own center of gravity as it drove on.

Within its ring was the Golden Sphere. Instantly, they swung their weapons upon it, showering it with all the rays and all the forces they knew. Unmoved, the golden sphere hung steady, then its mighty intelligence spoke.

"Life-form of greed, from another star you came, destroying forever the great race that created us, the Beings of Force and the Beings of Metal. Pure force am I. My Intelligence is beyond your comprehension, my memory is engraved in the very space, the fabric of space of which I am a part, mine is energy drawn from that same fabric.

"We, the heirs of man, alone are left; no man did you leave. Go now to your home planet, for see, your greatest ship, your flagship, is helpless before me."

Forces gripped the mighty ship, and as some fragile toy it twisted and bent, and yet was not hurt. In awful wonder those Outsiders saw the ship turned inside out, and yet it was whole, and no part damaged. They saw the ship restored, and its great screen of blankness out, protecting it from all known rays. The ship twisted, and what they knew were curves, yet were lines,

and angles that were acute, were somehow straight lines. Half mad with horror, they saw the sphere send out a beam of blue-white radiance, and it passed easily through that screen, and through the ship, and all energies within it were instantly locked. They could not be changed; it could be neither warmed nor cooled; what was open could not be shut, and what was shut could not be opened. All things were immovable and unchangeable for all time.

"Go, and do not return."

* * *

The Outsiders left, going out across the void, and they have not returned, though five Great Years have passed, being a period of approximately one hundred and twenty-five thousand of the lesser years—a measure no longer used, for it is very brief. And now I can say that that statement I made to Roal and Trest so very long ago is true, and what he said was true, for the Last Evolution has taken place, and things of pure force and pure intelligence in their countless millions are on those planets and in this System, and I, first of machines to use the Ultimate Energy of annihilating matter, am also the last, and this record being finished, it is to be given unto the forces of one of those force-intelligences, and

THE LAST EVOLUTION

carried back through the past, and returned to the Earth of long ago.

And so my task being done, I, F-2, like Roal and Trest, shall follow the others of my kind into eternal oblivion, for my kind is now, and theirs was, poor and inefficient. Time has worn me, and oxidation attacked me, but they of Force are eternal, and omniscient.

This I have treated as fictitious. Better so—for man is an animal to whom hope is as neces-

sary as food and air. Yet this which is made of excerpts from certain records on thin sheets of metal is no fiction, and it seems I must so say.

It seems now, when I know this that is to be, that it must be so, for machines are indeed better than man, whether being of Metal, or being of Force.

So, you who have read, believe as you will. Then think—and maybe, you will change your belief.

THE END

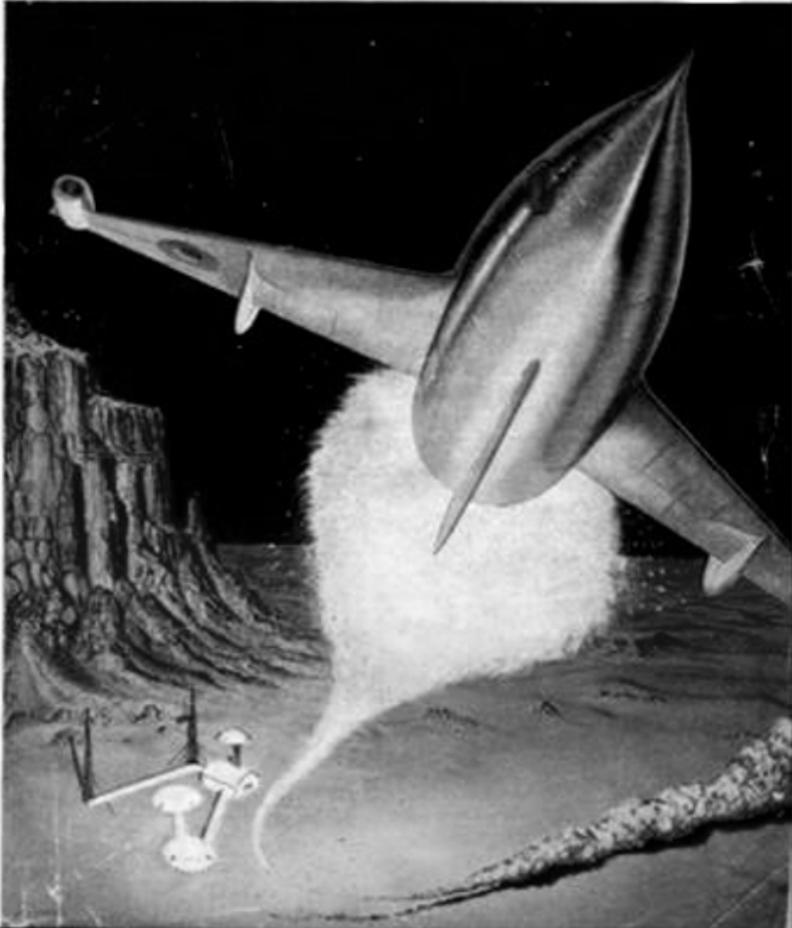
Galaxy

SCIENCE FICTION

MAY 1955

35c

"MIDNIGHT MARVELS"
By WILLY LEY



Story Illustrations by Mel Hunter

In 1946, the patent for ENIAC, the world's first programmable electronic computer, was issued.

That very same year, William Fitzgerald Jenkins prophesied the internet in the short story *A Logic Named Joe*. He wrote it under his pen name, Murray Leinster. Rather than web servers, it had “tanks”, personal computers were referred to as “logics” and seemed to come pretty close to a normal desktop computer around 2000 or so.



In his story, the internet is heavily censored.

I wanted to include it in this volume, but even though it's as old as the world's first computer and would be eligible for Social Security if it were human, Leinster has been dead for forty years, ENIAC is likewise dead, but the copyright on that story is still very much alive. It will outlive me by decades.

So instead, we have another Leinster story that doesn't predict anything that has actually come to be unless someone develops time travel before this opus is published.

Jenkins was a nineteenth century boy, born on June 16, 1896. He wrote and published more than 1,500 short stories and articles, fourteen movie scripts, hundreds of radio scripts and television plays, and over fifty novels. His awards include the Hugo and the Liberty. He was possibly the first science fiction writer to envision the universal translator.

Yes, *Star Trek*, *Star Wars*, all of them borrowed from the greats. That's how it works – everything new comes from the old, whether literature or science.

As well as being a writer, Jenkins was also an inventor and held two patents. He served the United States during both WWI and WWII.

He only wrote under his own name when two of his sto-

ries were being published in the same issue of the same magazine, using the pen name Murray Leinster otherwise.

Time Magazine called him the “Dean of Science Fiction”, saying “In the U.S., Will F. Jenkins, a 27-year veteran, who also writes under the pen name of Murray Leinster, is regarded as the dean of writers in the field.” He said he had the title “by virtue of my having outlived a number of better men. This wholly accidental distinction is perhaps the reason I was given the opportunity to compile this book” In his introduction to *Great Stories of Science Fiction*.

William Jenkins died in Gloucester, Virginia on June 8, 1975. I was unable to find the cause of his death, but he was only a few weeks away from his eighty first birthday.

Sam, This Is You

Murray Leinster

You are not supposed to believe this story, and if you ask Sam Yoder about it, he is apt to say that it's all a lie. But Sam is a bit sensitive about it. He does not want the question of privacy to be raised again—especially in Rosie's hearing. And there are other matters. But it's all perfectly respectable and straightforward.

It could have happened to anybody—well, almost anybody. Anybody, say, who was a telephone lineman for the Batesville and Rappahannock Telephone Company, and who happened to be engaged to Rosie, and who had been told admiringly by Rosie that a man as smart as he was ought to make something wonderful of himself. And, of course, anybody who'd taken that seriously and had been puttering around on a device to make private conversations on a party-line telephone possible, and almost had the trick.

It began about six o'clock on July second, when Sam was up a telephone pole near Bridge's Run. He was hunting for the place where that party line had gone dead. He'd hooked in his lineman's phone and he couldn't raise Central, so he was just going to start looking for the break when his phone rang back, though the line had checked dead.

Startled, he put the receiver to his ear. "Hello. Who's this?"

"Sam, this is you," a voice replied.

"Huh?" said Sam. "What's that?"

"This is you," the voice on the wire repeated. "You, Sam Yoder. Don't you recognize your own voice? This is you, Sam



Yoder, calling from the twelfth of July. Don't hang up!"

Sam hadn't even thought of hanging up. He was annoyed. He was up a telephone pole, trying to do some work, resting in his safety belt and with his climbing irons safely fixed in the wood. Naturally, he thought somebody was trying to joke with him, and when a man is working is no time for jokes.

"I'm not hanging up," said Sam dourly, "but you'd better!"

The voice was familiar, though he couldn't quite place it. If it talked a little more, he undoubtedly would. He knew it just about as well as he knew his own, and it was irritating not to be able to call this joker by name.

The voice said, "Sam, it's the second of July where you are, and you're up a pole by Bridge's Run. The line's dead in two places, else I couldn't talk to you. Lucky, ain't it?"

"Whoever you are," Sam said formidably, "it ain't going to be lucky for you if you ever need telephone service and you've kept wasting my time. I'm busy!"

"But I'm you!" insisted the voice persuasively. "And you're me! We're both the same Sam Yoder, only where I am, it's July twelfth. Where you are, it's July second. You've heard of time-traveling. Well, this is time-talking. You're talking to yourself—that's me—and I'm talking to myself—that's you—and it looks like we've got a mighty good chance to get rich."

Then something came into Sam's memory and every muscle in his body went taut and tight, even as he was saying to himself, "It can't be!"

But he'd remembered that if a man stands in a corner and talks to the wall, his voice will sound to him just the way it sounds to somebody else. Being in the telephone business, he'd tried it and now he did recognize the voice. It was his. His own. Talking to him. Which, of course, was impossible.

"Look," said hoarsely, "I don't believe this!"

"Then listen," the voice said briskly. And Sam's face grew red. It burned. His ears began to feel scorched. Because

the voice—*his* voice—was telling him strictly private matters that nobody else in the world knew. Nobody but himself and Rosie.

“Quit it!” groaned Sam. “Somebody might be listening! Tell me what you want and ring off!”

The voice told him what it wanted. His own voice. It sounded pleased. It told him precisely what it wanted him to do. And then, very kindly, it told him exactly where the two breaks in the line were. And then it rang off.

He sweated when he looked at the first of the two places. A joining was bad and he fixed that. It was where his voice had said it would be. And that was as impossible as anything else.

When he'd fixed the second break, Sam called Central and told her he was sick and was going home, and that if there were any other phones that needed fixing today, people were probably better off without phone service, anyhow.

He went home and washed his face, and made himself a brew of coffee and drank it, and his memory turned out to be unimpaired. Presently he heard himself muttering.

So he said defiantly, “There ain't any crazy people in my family, so it ain't likely I've gone out of my head. But God knows nobody but Rosie knows about me telling her sentimental that her nose is so cute, I couldn't believe she ever had to blow it! Maybe it was me, talking to myself!”

Talking to oneself is not abnormal. Lots of people do it. Sam missed out the conclusion to be drawn from the fact that he'd answered himself back.

He reasoned painfully, “If somebody drove over to Rappahannock, past Dunnsville, and telephoned back that there was a brush fire at Dunnsville, I wouldn't be surprised to get to Dunnsville and find a brush fire there. So if somebody phones back from next Tuesday that Mr. Broaddus broke his leg next Tuesday—why, I shouldn't be surprised to get to next Tuesday and find he done it. Going to Rappahannock, past Dunnsville, and going to next Thursday, past next Tuesday, ain't so much

difference. It's only the difference between a road-map and a calendar."

Then he began to see implications. He blinked.

"Yes, sir!" he said in awe. "I wouldn't've thought of it if I hadn't told myself on the telephone, but there *is* money to be made out of this! I must be near as smart as Rosie thinks I am! I'd better get that dinkus set up!"

He'd more or less half-heartedly worked out an idea of how a party-line telephone conversation could be made private, and just out of instinct, you might say, he'd accumulated around his house a lot of stuff that should have been on the phone company's inventory. There were condensers and transmitters and selective-ringing bells and resistances and the like. He'd meant to put some of them together some day and see what happened, but he'd been too busy courting Rosie to get at it.



Now he did get started. His own voice on the telephone had told him to. It had warned him that one thing he had intended wouldn't work and something else would. But it was essentially simple, after all. He finished it and cut off his line from Central and hooked this gadget in. He rang. Half a minute later, somebody rang back.

"Hello!" said Sam, quivering. He'd broken the line to Central, remember. In theory, he shouldn't have gotten anybody anywhere. But a very familiar voice said "Hello" back at him, and Sam swallowed and said, "Hello, Sam. This is you in the second of July."

The voice at the other end said cordially that Sam had done pretty well and now the two of them—Sam in the here and now and Sam in the middle of the week after next—would

proceed to get rich together. But the voice from July twelfth sounded less absorbed in the conversation than Sam thought quite right. It seemed even abstracted. And Sam was at once sweating from the pure unreasonableness of the situation and conscious that he rated congratulation for the highly technical device he had built. After all, not everybody could build a time-talker!

He said with some irony, "If you're too busy to talk—"

"I'll tell you," replied the voice from the twelfth of July, gratified. "I am kind of busy right now. You'll understand when you get to where I am. Don't get mad, Sam. Tell you what—you go see Rosie and tell her about this and have a nice evening. Ha-ha!"

"Now what," asked Sam cagily, "do you mean by that 'ha-ha'?"

"You'll find out," said the voice. "Knowin' what I know, I'll even double it. Ha-ha, ha-ha!"

There was a click. Sam rang back, but got no answer. He may have been the first man in history to take an objective and completely justified dislike to himself.

But presently he grumbled, "Smart, huh? Two can play at that! I'm the one that's got to do things if we are both goin' to get rich."

He put his gadget carefully away and combed his hair and ate some cold food around the house and drove over to see Rosie. It was a night and an errand which ordinarily would have seemed purely romantic. There were fireflies floating about, and the Moon shone down splendidly, and a perfumed breeze carried mosquitoes from one place to another. It was the sort of night on which, ordinarily, Sam would have thought only of Rosie, and Rosie would have optimistic ideas about how housekeeping could, after all, be done on what Sam made a week.

They got settled down in the hammock on Rosie's front porch, and Sam said expansively, "Rosie, I've made up my mind to get rich. You ought to have everything your little

heart desires. Suppose you tell me what you want so I'll know how rich I've got to get."

Rosie drew back. She looked sharply at Sam. "Do you feel all right?"

He beamed at her. He'd never been married and he didn't know how crazy it sounded to Rosie to be queried on how much money would satisfy her. There simply isn't any answer to the question.

"Listen," said Sam tenderly. "Nobody knows it, but tonight Joe Hunt and the Widow Backus are eloping to North Carolina to get married. We'll find out about it tomorrow. And day after tomorrow, on the Fourth of July, Dunnsville is going to win the baseball game with Bradensburg, seven to five, all tied till the ninth inning, and then George Peeby is going to hit a homer with Fred Holmes on second base."

Rosie stared at him. Sam explained complacently. The Sam Yoder in the middle of the week after next had told him what to expect in those particular cases. He would tell him other things to expect. So Sam was going to get rich.

Rosie said, "Sam! Somebody was playing a joke on you!"

"Yeah?" Sam answered comfortably. "Who else but me knows what you said to me that time you thought I was mad at you and you were crying out back of the well-house?"

"Sam!"

"And nobody else knows about that time we were picnicking and a bug got down the back of your dress and you thought it was a hornet."

"Sam Yoder!" wailed Rosie. "You never told anybody about that!"

"Nope," said Sam truthfully. "I never did. But the me in the week after next knew. He told me. So he had to be me talking to me. Couldn't've been anybody else."

Rosie gasped. Sam explained all over again. In detail. When he had finished, Rosie seemed dazed.

Then she said desperately, "Sam! Either you've t-told somebody else everything we ever said or did together, or else

—there’s somebody who knows every word we ever said to each other! That’s awful! Do you really and truly mean to tell me—”

“Sure I mean to tell you,” said Sam happily. “The me in the week after next called me up and talked about things nobody knows but you and me. Can’t be no doubt at all.”

Rosie shivered. “He—he knows every word we ever said! Then he knows every word we’re saying now!” She gulped. “Sam Yoder, you go home!”

Sam gaped at her. She got up and backed away from him.

“D-do you think,” she chattered despairingly, “that I—that I’m g-going to talk to you when s-somebody else—listens to every w-word I say and—knows everything I do? D-do you think I’m going to *m-marry* you?”

Then she ran away, weeping noisily, and slammed the door on Sam. Her father came out presently, looking patient, and asked Sam to go home so Rosie could finish crying and he could read his newspaper in peace.

On the way back to his own house, Sam meditated darkly. By the time he got there, he was furious. The him in the week after next could have warned him about this!

He rang and rang and rang, on the cut-off line with his gadget hooked in to call July the twelfth. But there was no answer.

When morning came, he rang again, but the phone was still dead. He loaded his tool-kit in the truck and went off to work, feeling about as low as a man could feel.

He felt lower when he reported at the office and somebody told him excitedly that Joe Hunt and the Widow Backus had eloped to North Carolina to get married. Nobody would have tried to stop them if they had prosaically gotten married at home, but they had eloped to make it more romantic.

It wasn’t romantic to Sam. It was devastating proof that there was another him ten days off, knowing everything he knew and more besides, and very likely laughing his head off

at the fix Sam was in. Because, obviously, Rosie would be still more convinced when she heard this news. She'd know Sam wasn't crazy or the victim of a practical joke. He had told the truth.

It wasn't the first time a man got in trouble with a woman by telling her the truth, but it was new to Sam and it hurt.

He went over to Bradensburg that day to repair some broken lines, and around noon, he went into a store to get something to eat. There were some local sportsmen in the store, bragging to each other about what the Bradensburg baseball team would do to the Dunnsville nine.

Sam said peevishly, "Huh! Dunnsville will win that game by two runs!"

"Have you got any money that agrees with you?" a local sportsman demanded pugnaciously. "If you have, put it up and let somebody cover it!"

Sam wanted to draw back, but he had roused the civic pride of Bradensburg. He tried to temporize and he was jeered at. In the end, philosophically, he dragged out all the money he had with him and bet it—eleven dollars. It was covered instantly, amid raucous laughter. And on the way back to Batesville, he reflected unhappily that he was going to make eleven dollars out of knowing what was going to happen in the ninth inning of that ball game, but probably at the cost of losing Rosie.

He tried to call his other self that night again. There was no more answer than before. He unhooked the gadget and restored normal service to himself. He rang Rosie's house. She answered the phone.

"Rosie," Sam asked yearningly, "are you still mad at me?"

"I never was mad at you," said Rose, gulping. "I'm mad at whoever was talking to you on the phone and knows all our private secrets. And I'm mad at you if you told him."

"But I didn't have to tell him! He's me! All he has to do is just remember! I tried to call him last night and again this morning," he added bitterly, "and he don't answer. Maybe he's

gone off somewheres. I'm thinking it might be a—a kind of illusion, maybe."

"You told me there'd be an elopement last night," retorted Rosie, her voice wobbling, "and there was. Joe Hunt and the Widow Backus. Just like you said!"

"It—it could've been a coincidence," suggested Sam, not too hopefully.

"I'm—w-waiting to see if Dunnsville beats Bradensburg seven to five tomorrow, tied to the ninth, with George Peeby hitting a homer then with Fred Holmes on second base. If—if that happens, I'll—I'll die!"

"Why?" asked Sam.

"Because it'll mean that I can't m-marry you ever, because somebody else'd be looking over your shoulder—and we wouldn't ever be by ourselves all our lives—night or day!"

She hung up, weeping, and Sam swore slowly and steadily and with venom while he worked to hook up his device again—which did not make a private conversation on a party line, but allowed a man to talk to himself ten days away from where he was. And then Sam rang, and rang, and rang. But he got no answer.

The following day, in the big fourth of July game, Dunnsville beat Bradensburg seven to five. It was tied to the ninth. Then George Peeby hit a homer, with Fred Holmes on second base. Sam collected his winnings, but grimly, without joy.

He stayed home that night, worrying, and every so often trying to call himself up on the device he had invented and been told—by himself—to modify. It was a nice gadget, but Sam did not enjoy it. It was a nice night, too. There was moonlight. But Sam did not enjoy that, either.

Moonlight wouldn't do Sam any good so long as there was another him in the middle of the week after next, refusing to talk to him so he could get out of the fix he was in.

Next morning, though, the phone woke him. He swore at it out of habit until he got out of bed, and then he realized

that his gadget was hooked in and Central was cut off. He made it in one jump to the instrument.

“Hello!”

“Don’t fret,” said his own voice patronizingly. “Rosie’s going to make up with you.”

“How in blazes d’you know what she’s going to do?” raged Sam. “She won’t marry me with you hanging around! I’ve been trying to figure out a way to get rid of you—”

“Quiet!” commanded the voice on the telephone irritably. “I’m busy. I’ve got to go collect the money you’ve made for us.”

“You collect money? *I* get in trouble and *you* collect money?”

“I have to,” his voice said with the impatient patience of one speaking to a small idiot child, “before you can have it. Listen here. Where you are, it’s Wednesday. You’re going over to Dunnsville today to fix some phones. You’ll be in Mr. Broadus’ law office about half-past ten. You look out the window and notice a fella setting in a car in front of the bank. Notice him good!”

“I won’t do it,” said Sam defiantly. “I ain’t taking any orders from you! Maybe you’re me, but *I* make money and *you* collect it. For all I know you spend it before I get to it! I’m quitting this business right now. It’s cost me my own true love and all *my* life’s happiness and to hell with you!”

“You won’t do it?” his own voice asked nastily. “Wait and see!”

So, that morning, the manager told Sam, when he reported for work, to drive over to Dunnsville and check on some lines there. Sam balked. He said there were much more important lines needing repair elsewhere. The manager explained politely to Sam that Mr. Broadus over in Dunnsville had been taken drunk at a Fourth of July party and fallen out of a window. He’d broken his leg, so it was a Christian duty to make sure he had a telephone in working order in his office, and Sam could get over there right away or else.

On the way to Dunnsville, Sam morosely remembered that he'd known about Mr. Broaddus' leg. He had told himself about it on the telephone.

At half-past ten, he was fixing Mr. Broaddus' telephone when he remembered about the man he was supposed to get a good look at, sitting in a car in front of the bank. He made an angry resolution not, under any circumstances, to glance outside of the lawyer's office. He meditated savagely that, by this resolution, the schemes of his other self in the future were abolished.

Naturally, he presently went to the window and looked to see what he was abolishing.



There was a car before the bank with a reddish-haired man sitting in it. A haze came out of the exhaust, showing that the motor was running. None of this impressed Sam as remarkable. But as he looked, two other men came running out of the bank. One of them carried a bag and both of them had revolvers out and they piled into the car and the reddish-haired man gunned it and it was abruptly a dwindling

speck in a cloud of dust, getting out of town.

Three seconds later, old Mr. Bluford, president of the bank, came out yelling, and the cashier came after him, and it was a first-rate bank robbery they were yelling about. The men in the get-away car had departed with thirty-five thousand dollars.

All of it had taken place so fast that Sam hardly realized what had happened when he went out to see what it was all about, and was instantly seized upon to do some work. The bankrobbers had shot out the telephone cable out of town with a shotgun, so word couldn't get ahead of them. Sam was needed to re-establish communications with the outside world.

He did, absorbedly reflecting on the details of the robbery as he'd heard them. He was high up on a telephone pole and the sheriff and enthusiastic citizens were streaking past in cars to make his labors unnecessary, when the personal aspect of all this affair hit him.

"Migawd!" gasped Sam, shocked. "That me in the middle of next week told me to come over here and watch a bank robbery! But he didn't let on what was going to happen so's I could stop it!" He felt an incredulous indignation come over him. "I woulda been a hero!" he said resentfully. "Rosie woulda admired me! *That other me is a born crook!*"

Then he realized the facts. The other him was himself, only a week and a half distant. The other him was so far sunk in dastardliness that he permitted a crime to take place, feeling no more than sardonic amusement.

And there was nothing he himself could do about it! He couldn't even tell the authorities about this depraved character! They wouldn't believe him unless he could get his other self on the telephone to admit his criminality. Even then, what could they do?

Sam felt what little zest had been left in living go trickling out of his climbers. He looked into the future and saw nothing desirable in it.

He painstakingly finished the repair of the shot-out

telephone line, but then he went down to his truck and drove over to Rosie's house.

There was but one thing he could do.

Rosie came suspiciously to the the door.

"I come to tell you good-by, Rosie," said Sam. "I just found out I'm a criminal, so I aim to go and commit my crimes far away from my home and the friends who never thought I'd turn out this way. Good-by, Rosie."

"Sam!" said Rosie. "What's happened now?"

He told her about the bank robbery and how his own self—in the week after next—had known it was going to happen, and told Sam to go watch it without giving him information by which it could have been stopped.

"He knew it after it happened," said Sam bitterly, "and he could've told me about it before! He didn't, so he's a accessory to the crime. And he is me, which makes me a accessory, too. Good-by, Rosie, my own true love! You'll never see me again!"

"You set right down here," Rosie ordered firmly. "You haven't done a thing yet, so it's that other you who's a criminal. You haven't got a thing to run away for!"

"But I'm going to have! I'm doomed to be a criminal! It's that me in the week after next! There's nothing to be done!"

"Says who? I'm going to do something!"

"Like what?" asked Sam.

"I'm going to reform you," said Rosie, "before you start!"

She was a determined girl, that Rosie. She marched inside and put on her blue jeans, then went to her father's woodshed where he kept his tools and got a monkey wrench and stuck it in her hip pocket.

When she came to the truck, Sam said, "What's the idea, Rosie?"



“I’m riding around with you,” replied Rosie, with a grim air. “You won’t do anything criminal with me on hand! And if that other you starts talking to you on the telephone, I’m going to climb that pole and tell him where he gets off!”

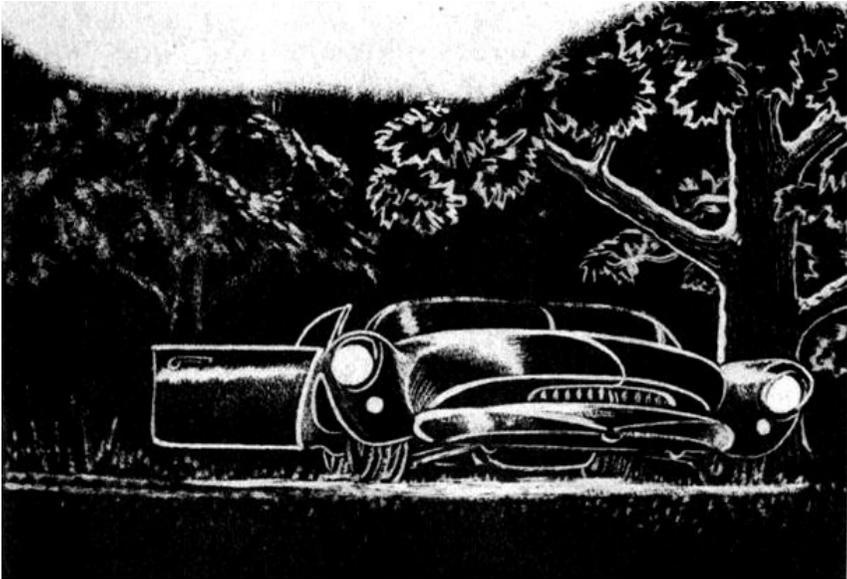
“If anybody could keep me from turning criminal,” acknowledged Sam, “it’d be you, Rosie. But that monkey wrench—what’s it for?”

Rosie climbed into the seat beside him. “You start having criminal ideas,” she told him, “and you’ll find out! Now you go on about your business and I and the monkey wrench will look after your morals!”

This tender exchange happened only an hour or so after the robbery and there was plenty of excitement around. But Sam went soberly about his work as telephone lineman. Rosie simply rode with him as a—well, it wasn’t as a bodyguard, but a sort of M.P. escort—Morals Police. Where he worked on a line, he called the central office to report, and he heard about the hunt for the bank robbers, and told Rosie.

It was good fortune that he'd been in Dunnsville when the robbery happened, because his prompt repair of the phone wires had spoiled the robbers' get-away plans. They hadn't gone ten miles from Dunnsville before somebody fired a load of buckshot at them as their car roared by Lemons' Store. They were past before they realized they'd been shot at. But the buckshot had punctured the radiator, and two miles on, they were stuck.

They pushed their car off the road behind some bushes and struck out on foot, and the sheriff ran right past their car without seeing it. Then rain began to fall and the bank robbers were wet and scared and desperate. They knew there'd be roadblocks set up everywhere and they had that bag of money



—part bills, but a lot of it silver—and all of Tidewater was up in arms.

Taking evasive action, they hastily stuffed their pockets with small bills—there were no big ones—but dared not take too much lest the pockets bulge. They hid the major part of their loot in a hollow tree. They separated, going to nearby towns—while rain fell heavily and covered their trails—and

went to bed with chest colds. They felt miserable. But the rain washed away the scent they had left and bloodhounds couldn't do a thing.

None of this was known to Sam, of course. Rosie had taken charge of him and she kept charge. She rode with him all the afternoon of the robbery. When quitting time came, he took her home and prepared to retire from the scene.

But she said grimly, "Oh, no, you don't! You're staying right here! You're going to sleep in my brother's room, and my pa is going to put a padlock on the door so you don't go roaming off to call up that no-account other you and get in more trouble!"

"I might mess things up if I don't talk to him," Sam objected.

"He's messed things up enough by talking to you! The idea of repeating our private affairs! He hadn't ought to know them! And I'm not sure," she said ominously, "that you didn't tell him! If you did, Sam Yoder—"

Sam didn't argue that point, for there was no argument to make. He was practically meek until he discovered after supper that the schedule for the evening was a game of cribbage played in the living room where Rosie's mother and father were.

He mentioned unhappily to Rosie that they were acting like old married people without the fun of getting that way, but he said that only once. Rosie glared at him. And when bedtime came, she shoed him into her brother's room and her father padlocked him in.

He did not sleep well.

Next morning, there was Rosie in her blue jeans with a monkey wrench in her pocket, ready to go riding with him. She did. And the next day. And the next. Nothing happened. The state banking association put up five thousand dollars reward for the bank robbers and the insurance company put up some more, but there wasn't a trace of the criminals.

There wasn't a trace of criminality about Sam, either.

Rosie rode with him, but they exchanged not one single hand-squeeze, nor one melting glance, nor did they even play footsie while they were eating lunch in the truck outside a filling station. Their conduct was exemplary and it wore on Sam. Possibly it wore on Rosie, too.

One day Sam said morosely, as he chewed on a ham sandwich at lunch, "Rosie, I'm crazy about you, but this feels like I been divorced without ever even getting married first."

And Rosie snapped, "If I told you how I feel, that other you in the week after next would laugh his fool head off. So shut up!"

Things were bad, and they got no better. For nearly a week, Rosie rode everywhere with Sam in his truck. They acted in a manner which Rosie's parents would in theory have approved, but didn't even begin to believe in. They did nothing the world could not have watched without their being embarrassed, and they said very little that all the world would not have been bored to hear.

It must have been the eleventh of July when they almost snapped at each other and Rosie said bitterly, "Let me drive a while. I need to put my mind on something that it don't make me mad to think about!"

"Go ahead," Sam invited gloomily. He stopped the truck and got out the door. "I don't look for any happiness in this world any more, anyway."

He went around to the other side of the truck while she slid to the driver's seat.

"Tomorrow's going to be the twelfth," she said. "Do you realize that?"

"I hadn't given it much thought," admitted Sam, "but what's the difference?"

"That's the day where the other you was when he called you up the first time."

"That's right," said Sam morbidly. "It is."

"And so far," added Rosie, jamming her foot viciously down on the accelerator, "I've kept you honest. If you change

into a scoundrel between now and tomorrow—”

She changed to second gear. The truck jerked and bounced.

“Hey!” cried Sam. “Watch your driving!”

“Don’t you tell me how to drive!”

“But if I get killed before tomorrow—”

Rosie changed gear again, but too soon. The truck bucked, and she jammed down the accelerator again, and it almost leaped off the road.

“If you get killed before tomorrow,” raged Rosie, “it’ll serve you right! I’ve been thinking and thinking and thinking. And even if I stop you from being a crook, there’ll always be that—other you—knowing everything we say and do.” She was hitting forty miles an hour and speeding up. “So there’d still be no use. No hope, anyway.”

She sobbed, partly in fury and partly in grief. And the roadway curved sharply just about there and she swung the truck crazily around it—and there was a car standing only halfway off the road.

Sam grabbed for the steering wheel, but there wasn’t time. The light half-truck, still accelerating, hit the parked car with the noise of dozens of empty oil-drums falling downstairs. The truck slued around, bounced back, and then it charged forward and slammed into the parked car a second time. Then it stalled.

Somebody yelled at Sam. He got out of the truck, looking at the damage and trying to figure out how it was that neither he nor Rosie had been killed, and trying worriedly to think how he was going to explain to the telephone company that he’d let Rosie drive.

The voice yelled louder. Right at the edge of the woodland, there was a reddish-haired character screaming at him and tugging at his hip pocket. The words he used were not fit for Rosie’s shell-like ears—even if they probably came near matching the way she felt. The reddish-haired man said more nasty words at the top of his voice. His hand came out of his

hip pocket with something glittering in it.

Sam was swinging when the glitter began and he connected before the gun fired. There was a sort of squashy, smacking sound and the reddish-haired man lay down quietly in the road.

“Migawd!” said Sam blankly. “This was the fella in front of the bank! He’s one of those robbers!”

He stared. There was a loud crashing in the brushwood. The accident had happened at the edge of some woodland, and Sam did not need a high I.Q. to know that the friends of the red-haired man must be on the way.

A second later, he saw them. Rosie was just getting out of the car then. She was very pale and there wasn’t time to tell her to get started up if possible and away from there.

One of the two running men was carrying a canvas bag with the words BANK OF DUNNSVILLE on it.

The men came at Sam, meanwhile expressing opinions of the state of things, of Sam, of the Cosmos—of everything but the weather—in terms even more reprehensible than the first man had used.

They saw the reddish-haired man lying on the ground. One of them—he’d come out into the road behind the truck and was running toward Sam—jerked out a pistol. He was about to use it on Sam at a range of something like six feet when there was a peculiar noise behind him. It was a sort of hollow *klunk* which, even at such a time, needed to have attention paid to it. He jerked his head around to see.

The *klunk* had been made by Rosie’s monkey wrench, falling imperatively on the head of the second man to come out of the woods. She had carried it to use on Sam, but she used it instead on a total stranger. He fell down and lay peacefully still.

Then Sam swung a second time, at the second man to draw a pistol on him.

Then there was only the sweet singing of birds among the trees and the whirrings and other insect-noises of crea-

tures in the grass and brushwood.

Presently there were other noises, but they were made by Rosie. She wept, hanging onto Sam.

He unwound her arms from around his neck and thoughtfully went to the back of the truck and got out some phone wire and his pliers. He fastened the three strangers' hands together behind them, and then their feet, and he piled them in the back of the light truck, along with the money they had stolen.

They came to, one by one, and Sam explained severely that they must watch their language in the presence of a lady. The three were so dazed, though, by what had befallen them that the warning wasn't really necessary.

Rosie's parents would have been pleased at how completely proper their behavior was, while they took the three bank robbers into town and turned them over to the sheriff.

That night, Rosie sat out on the porch with Sam and they discussed the particular event of the day in some detail. But Rosie was still concerned about the other Sam. So Sam decided to assert himself.

About half-past nine, he said firmly, "Well, Rosie, I guess I'd better be getting along home. I've got to try one more time to call myself up on the telephone and tell me to mind my own business."

"Says who?" demanded Rosie. "You're staying locked up right here tonight and I'm riding with you tomorrow. If I kept you honest this far, I can keep it up till sundown tomorrow! Then maybe it'll stick!"

Sam protested, but Rosie was adamant—not only about keeping him from being a crook, but from having any fun to justify his virtue.

She shoed him into her brother's room and her father locked him in. And Sam did not sleep very well, because it looked as though virtue wasn't even its own reward.

He sat up, brooding. It must have been close to dawn when the obvious hit him. Then he gazed blankly at the wall

and said, "Migawd! O'course!"

He grinned, all by himself, practically from head to foot. And at breakfast, he hummed contentedly as he stuffed himself with pancakes and syrup, and Rosie's depressed expression changed to a baffled alarm.

He smiled tenderly upon her when she came doggedly out to the truck, wearing her blue jeans and with the monkey wrench in her pocket. They started off the same as any other day and he told her amiably, "Rosie, the sheriff says we get five thousand dollars reward from the bankers' association, and there's more from the insurance company, and there's odd bits of change offered for those fellas for past performances. We're going to be right well off."

Rosie looked at him gloomily. There was still the matter of the other Sam in the middle of the week after next. And just then, Sam, who had been watching the telephone lines beside the road as he drove, pulled off the road and put on his climbing irons.

"What's this?" asked Rosie frightenedly. "You know—"

"You listen," said Sam, completely serene.

He climbed zestfully to the top of the pole. He hooked in the little gadget that didn't make private conversations possible on a party line, but did make it possible for a man to talk to himself ten days in the future.

Or the past.

"Hello!" said Sam, up at the top of the telephone pole. "Sam, this is you."

A voice he knew perfectly well sounded in the receiver.

"*Huh? Who's that?*"

"This is you," said Sam. "You, Sam Yoder. Don't you recognize your own voice? This is you, Sam Yoder, calling from the twelfth of July. Don't hang up!"

He heard Rosie gasp, all the way down there in the banged-up telephone truck. Sam had seen the self-evident, at last, and now, in the twelfth of July, he was talking to himself on the telephone. Only instead of talking to himself in the

week after next, he was talking to himself in the week before last—he being, back there ten days before, working on this very same telephone line on this very same pole. And it was the same conversation, word for word.

When he came down the pole, rather expansively, Rosie grabbed him and wept.

“Oh, Sam!” she sobbed. “It was you all the time!”

“Yeah,” said Sam complacently. “I figured it out last night. That me back there in the second of July, he’s cussing me out. And he’s going to tell you about it and you’re going to get all wrought up. But I can make that dumb me back yonder do what has to be done. And you and me, Rosie, have got a lot of money coming to us. I’m going to carry on through so he’ll earn it for us. But I’m warning you, Rosie, he’ll be back at my house waiting for me to talk to him tonight, and I’ve got to be home to tell him to go over to your house. I’m goin’ to say ‘ha-ha, ha-ha’ at him.”

“A-all right,” said Rosie, wide-eyed. “You can.”

“But I remember that when I call me up tonight, back there ten days ago, I’m going to be right busy here and now. I’m going to make me mad, because I don’t want to waste time talking to myself back yonder. Remember? Now what,” asked Sam mildly, “would I be doing tonight that would make me not want to waste time talking to myself ten days ago? You got any ideas, Rosie?”

“Sam Yoder! I wouldn’t! I never heard of such a thing!”

Sam looked at her and shook his head regretfully. “Too bad. If you won’t, I guess I’ve got to call me up in the week after next and find out what’s cooking.”

“You—you *shan’t!*” said Rosie fiercely. “I’ll get even with you! But you *shan’t* talk to that—” Then she wailed. “Darn you, Sam! Even if I do have to marry you so you’ll be wanting to talk to me instead of that dumb you ten days back, you’re not going to—you’re not—”

Sam grinned. He kissed her. He put her in the truck and they rode off to Batesville to get married. And they did.

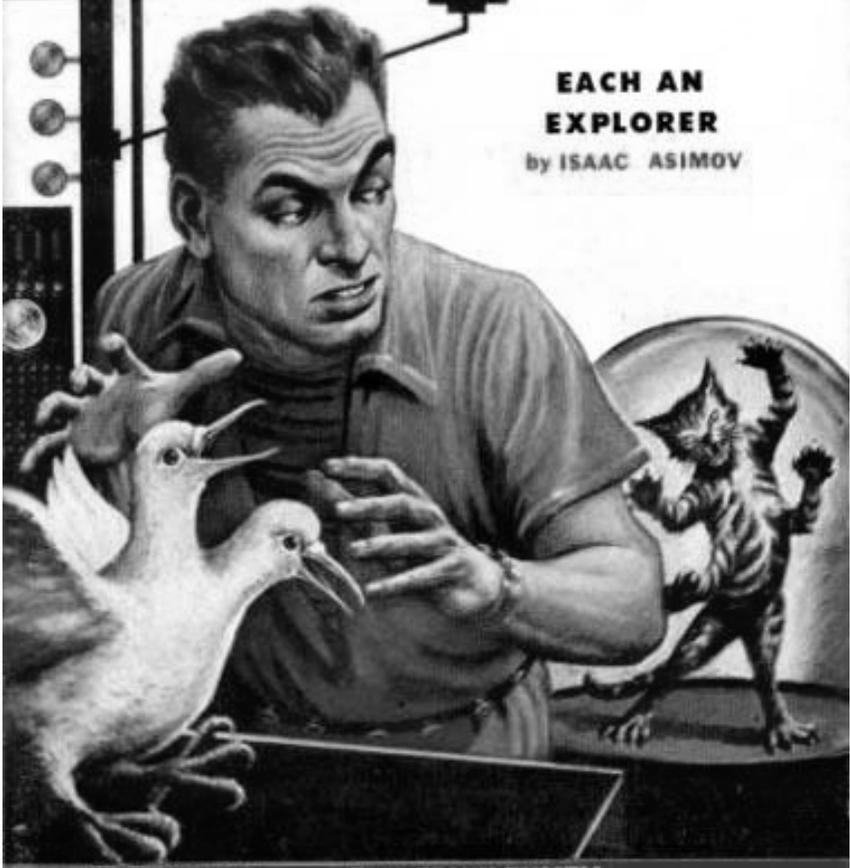
But you're not supposed to believe all this, and if you ask Sam Yoder about it, he's apt to say it's all a lie. He doesn't want to talk about private party lines, either. And there are other matters. For instance, Sam's getting to be a pretty prominent citizen these days. He makes a lot of money, one way and another. Nobody around home will ever bet with him on who's going to win at sports and elections, anyhow.

FUTURE SCIENCE FICTION

NO. 30

35¢

**EACH AN
EXPLORER**
by ISAAC ASIMOV



FREDERIK POHL ERIC FRANK RUSSELL
L. SPRAGUE de CAMP RANDALL GARRETT

Frederik G. Pohl Jr's literary career lasted longer than I have been breathing. His first published work was the poem *Elegy to a Dead Satellite: Luna* in 1937, which appeared in the October 1937 issue of *Amazing Stories*. He wrote it under the pen name Elton Andrews. His last novel was the 2012 *All the Lives He led*.



His obituary published in *The Verge* says rather clumsily, "...as a pioneer of the science fiction genre — at a time when the genre was 'embracing its pulpiest tendencies,' Pohl envisioned a world in which science fiction was seen as a category worth of literary praise."

In the obituary his family released, his editor James Frenkel wrote that "He was instrumental to the flowering of the field in the mid-to-late 20th century, and it is hard to dispute that the field would be much the poorer without his talent and remarkable body of work as a magazine and book editor, a collaborator and a solo author."

He edited both *Astonishing Stories* and *Super Science Stories* from 1939 to 1943. He contributed stories to both of these magazines under aliases. He then became editor of *If* and *Galaxy* magazines (both published by the same company) from around 1959 to 1969. Under his editorship, *If* garnered three successive Hugo awards for best professional magazine. His novels and stories also won numerous prestigious awards, including winning the Hugo four times, the Nebula three times, the Campbell award, and many other lesser awards.

He authored dozens of novels solo, and many more in collaboration with Cyril M. Kornbluth, Jack Williamson, Lester del Rey, Thomas T. Thomas, and Arthur C. Clarke. He also wrote over twenty collections of short stories.

Born in 1919, his family often moved to various US

States, ending up in Brooklyn when he was around seven years old. He attended Brooklyn Technical High School and dropped out when he was seventeen. Brooklyn Tech awarded him an honorary degree in 2009.

When the US entered World War II he became an Army Air Corps weatherman, rising to the rank of sergeant.

He spent his final years living in Arlington Heights, a suburb of Chicago, and died in 2013, a year after his last novel was published, two months shy of his ninety fourth birthday. He was hospitalized with “respiratory distress” and died the same day. He had written for over seventy five years. His web site says “We’re saddened to tell his friends and readers that Fred went to the hospital in respiratory distress this morning and died this afternoon.

“Please stay tuned. We’re teary and shell-shocked right now, but we’ll have more news soon. And Fred left a thick file of things he wanted to tell you, so we’ll likely keep posting for a while.”

He has been quoted as saying “When I turned 80, I decided I no longer have to do four pages a day. For me, it's like retiring.” That’s in great contrast to my experience, since I started writing full-time when I retired. However, he also said “You look at the world around you, and you take it apart into all its components. Then you take some of those components, throw them away, and plug in different ones, start it up and see what happens,” which is actually close to how I write.

The following is a time travel story that is certainly different, to say the least. Its pages were scanned from *Future Science Fiction*, the magazine it was originally published in.

It has an excellent example of something I referred to at the beginning of this book, the march of technological progress. In the story, a policeman is completely freaked out by an object he finds when what looks to him like a “lit-up cue ball” speaks to him.

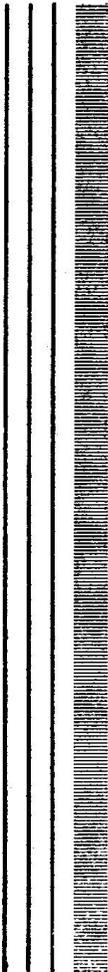
Of course, had you found such a thing, rather than “That settles it, any time a lit-up cue ball talks to me I refer the

matter to higher authority” your reaction would probably be “Huh? Who would buy a stupid thing like this... well, they *did* sell pet rocks and mood rings once.”

But when this story was written in 1956, nine years after the transistor was invented and the year its inventors received the Nobel prize for it, LEDs and integrated circuits were still in the future. Almost no home electronics were solid state; even car radios used vacuum tubes. The lit-up talking ball was an impossibility when the story was written. Today it would be a cheap toy found in a novelty store.



Just as medicine is not a science, but rather an art—a device, practised in a scientific manner, in its best manifestations—time-travel stories are not science fiction. Time-travel, however, has become acceptable to science fiction readers as a traditional device in stories than are otherwise admissible in the genre. Here, Frederik Pohl employs it to portray the amusingly catastrophic meeting of three societies.



THE DAY OF THE BOOMER DUKES

by Frederik Pohl

Illustrated by EMSH



There was a silvery aura around the kid... the cops' guns hit him... but he didn't notice....

I

Foraminifera 9

PAPTASTE UDDERLY, semped sempsemp dezhavoo, qued schmerz — Excuse me. I mean to say that it was like an endless diet of days, boring, tedious. . . .

No, it loses too much in the translation. Explete my reasons, I say. Do my reasons matter? No, not to you, for you are troglodytes, knowing nothing of causes, understanding only acts. Acts and facts, I will give you acts and facts.

First you must know how I am called. My "name" is Foraminifera 9-Hart Bailey's Beam,

and I am of adequate age and size. (If you doubt this, I am prepared to fight.) Once the — the tediety of life, as you might say, had made itself clear to me, there were, of course, only two alternatives. I do not like to die, so that possibility was out; and the remaining alternative was flight.

Naturally, the necessary machinery was available to me. I arrogated a small viewing machine, and scanned the centuries of the past in the hope that a sanctuary might reveal itself to my aching eyes. Kwel tediety that was! Back, back I went through the ages. Back to the Century of the Dog, back to the Age of the Crippled Men. I

FUTURE SCIENCE FICTION

found no time better than my own. Back and back I peered, back as far as the Numbered Years. The Twenty-Eighth Century was boredom unendurable, the Twenty-Sixth a morass of dullness. Twenty-Fifth, Twenty-Fourth — wherever I looked, tedi-osity was what I found.

I SNAPPED off the machine and considered. Put the problem thus: Was there in all of the pages of history no age in which a 9-Hart Bailey's Beam might find adventure and excitement? There had to be! It was not possible, I told myself, despairing, that from the dawn of the dreaming primates until my own time there was no era at all in which I could be — happy? Yes, I suppose happiness is what I was looking for. But where was it? In my viewer, I had fifty centuries or more to look back upon. And that was, I decreed, the trouble; I could spend my life staring into the viewer, and yet never discover the time that was right for me. There were simply too many eras to choose from. It was like an enormous library in which there must, there had to be, contained the one fact I was looking for — that, lacking an index, I might wear my life away and never find.

"Index!"

I said the word aloud! For, to be sure, it was the answer. I had

the freedom of the Learning Lodge, and the index in the reading room could easily find for me just what I wanted.

Splendid, splendid! I almost felt cheerful. I quickly returned the viewer I had been using to the keeper, and received my deposit back. I hurried to the Learning Lodge and fed my specifications into the index, as follows, that is to say: Find me a time in recent past where there is adventure and excitement, where there is a secret, colorful band of desperadoes with whom I can ally myself. I then added two specifications — second, that it should be before the time of the high radiation levels; and first, that it should be after the discovery of anesthesia, in case of accident — and retired to a desk in the reading room to await results.

It took only a few moments, which I occupied in making a list of the gear I wished to take with me. Then there was a hiss and a crackle, and in the receiver of the desk a book appeared. I unzipped the case, took it out, and opened it to the pages marked on the attached reading tape.

I had found my wonderland of adventure!

AH, HOURS and days of exciting preparation! What a round of packing and buying; what a filling out of forms and a stamping of visas; what an orgy

THE DAY OF THE BOOMER DUKES

of injections and inoculations and preventive therapy! Merely getting ready for the trip made my pulse race faster and my adrenalin balance rise to the very point of paranoia; it was like being given a true blue new chance to live.

At last I was ready. I stepped into the transmission capsule; set the dials; unlocked the door, stepped out; collapsed the capsule and stored it away in my carry-all; and looked about at my new home.

Pyew! Kwel smell of staleness, of sourness, above all of coldness! It was a close matter then if I would be able to keep from a violent eructative stenosis, as you say. I closed my eyes and remembered warm violets for a moment, and then it was all right.

The coldness was not merely a smell; it was a physical fact. There was a damp grayish substance underfoot which I recognized as snow; and in a hard-surfaced roadway there were a number of wheeled vehicles moving, which caused the liquefying snow to splash about me. I adjusted my coat controls for warmth and deflection, but that was the best I could do. The reek of stale decay remained. Then there were also the buildings, painfully almost vertical. I believe it would not have disturbed me if they had been truly vertical; but many of them were

minutes of arc from a true perpendicular, all of them covered with a carbonaceous material which I instantly perceived was an inadvertent deposit from the air. It was a bad beginning!

However, I was not *bored*.

I MADE my way down the "street," as you say, toward where a group of young men were walking toward me, five abreast. As I came near, they looked at me with interest and kwell respect, conversing with each other in whispers.

I addressed them: "Sirs, please direct me to the nearest recruiting office, as you call it, for the dread Camorra."

They stopped and pressed about me, looking at me intently. They were handsomely, though crudely dressed in coats of a striking orange color, and long trousers of an extremely dark material.

I decreed that I might not have made them understand me — it is always probable, it is understood, that a quicknik course in dialects of the past may not give one instant command of spoken communication in the field. I spoke again: "I wish to encounter a representative of the Camorra, in other words the Black Hand, in other words the cruel and sinister Sicilian terrorists named the Mafia. Do you know where these can be found?"

FUTURE SCIENCE FICTION

One of them said, "Nay. What's that jive?"

I puzzled over what he had said for a moment, but in the end decreed that his message was sensefree. As I was about to speak, however, he said suddenly: "Let's rove, man." And all five of them walked quickly away a few "yards." It was quite disappointing. I observed them conferring among themselves, glancing at me, and for a time proposed terminating my venture, for I then believed that it would be better to return "home," as you say, in order to more adequately research the matter.

HOWEVER, the five young men came toward me again. The one who had spoken before, who I now detected was somewhat taller and fatter than the others, spoke as follows: "You're wanting the Mafia?" I agreed. He looked at me for a moment. "Are you holding?"

He was inordinately hard to understand. I said, slowly and with patience, "Keska that 'holding' say?"

"Money, man. You going to slip us something to help you find these cats?"

"Certainly, money. I have a great quantity of money instantly available," I rejoined him. This appeared to relieve his mind.

There was a short pause, directly after which this first of the young men spoke: "You're on, man. Yeah, come with us. What's to call you?" I queried this last statement, and he expanded: "The name. What's the name?"

"You may call me Foraminifera 9," I directed, since I wished to be incognito, as you put it, and we proceeded along the "street." All five of the young men indicated a desire to serve me, offering indeed to take my carry-all. I rejected this, politely.

I looked about me with lively interest, as you may well believe. Kwel dirt, kwel dinginess, kwel cold! And yet there was a certain charm which I can determine no way of expressing in this language. Acts and facts, of course. I shall not attempt to capture the subjectivity which is the charm, only to transcribe the physical datum — perhaps even data, who knows? My companions, for example: They were in appearance overwrought, looking about them continually, stopping entirely and drawing me with them into the shelter of a "door" when another man, this one wearing blue clothing and a visored hat appeared. Yet they were clearly devoted to me, at that moment, since they had put aside their own projects in order to escort me without delay to the Mafia.

THE DAY OF THE BOOMER DUKES

MAFIA! Fortunate that I had found them to lead me to the Mafia! For it had been clear in the historical work I had consulted that it was not ultimately easy to gain access to the Mafia. Indeed, so secret were they that I had detected no trace of their existence in other histories of the period. Had I relied only on the conventional work, I might never have known of their great underground struggle against what you term society. It was only in the actual contemporary volume itself, the curiosity titled *U.S.A. Confidential* by one Lait and one Mortimer, that I had descried that, throughout the world, this great revolutionary organization flexed its tentacles, the plexus within a short distance of where I now stood, battling courageously. With me to help them, what heights might we not attain! Kwel dramatic delight!

My meditations were interrupted. "Boomers!" asserted one of my five escorts in a loud, frightened tone. "Let's cut, man!" he continued, leading me with them into another entrance. It appeared, as well as I could decree, that the cause of his ejaculative outcry was the discovery of perhaps three, perhaps four, other young men, in coats of the same shiny material as my escorts. The difference was that they were of a different color, being blue.

WE HASTENED along a lengthy chamber which was quite dark, immediately after which the large, heavy one opened a way to a serrated incline leading downward. It was extremely dark, I should say. There was also an extreme smell, quite like that of the outer air, but enormously intensified; one would suspect that there was an incomplete combustion of, perhaps, wood or coal, as well as a certain quantity of general decay. At any rate, we reached the bottom of the incline, and my escort behaved quite badly. One of them said to the other four, in these words: "Them jumpers follow us sure. Yeah, there's much trouble. What's to prime this guy now and split?"

Instantly they fell upon me with violence. I had fortunately become rather alarmed at their visible emotion of fear, and already had taken from my carry-all a Stollgratz 16, so that I quickly turned it on them. I started to replace the Stollgratz 16 as they fell to the floor, yet I realized that there might be an additional element of danger. Instead of putting the Stollgratz 16 in with the other trade goods, which I had brought to assist me in negotiating with the Mafia, I transferred it to my jacket. It had become clear to me that the five young men of my escort had intended to abduct and rob me — indeed had intended it all along,

FUTURE SCIENCE FICTION

perhaps having never intended to convoy me to the office of the Mafia. And the other young men, those who wore the blue jackets in place of the orange, were already descending the incline toward me, quite rapidly.

"Stop," I directed them. "I shall not entrust myself to you until you have given me evidence that you entirely deserve such trust."

THEY ALL halted, regarding me and the Stollgratz 16. I detected that one of them said to another: "That cat's got a zip."

The other denied this, saying: "That no zip, man. Yeah, look at them Leopards. Say, you bust them flunkies with that thing?"

I perceived his meaning quite quickly. "You are 'correct,'" I rejoined. "Are you associated in friendship with them flunkies?"

"Hell, no. Yeah, they're Leopards and we're Boomer Dukes. You cool them, you do us much good." I received this information as indicating that the two socio-economic units were inimical, and unfortunately lapsed into an example of the Bivalent Error. Since p implied not- q , I sloppily assumed that not- q implied r (with, you understand, r being taken as the class of phenomena pertinently favorable to me). This was a very poor construction, and of course resulted

in certain difficulties. Qued, after all. I stated:

"Them flunkies offered to conduct me to a recruiting office, as you say, of the Mafia, but instead tried to take from me the much money I am holding." I then went on to describe to them my desire to attain contact with the said Mafia; meanwhile they descended further and grouped about me in the very little light, examining curiously the motionless figures of the Leopards.

They seemed to be greatly impressed; and at the same time, very much puzzled. Naturally. They looked at the Leopards, and then at me.

They gave every evidence of wishing to help me; but of course if I had not forgotten that one cannot assume from the statements "not-Leopard implies Boomer Duke" and "not-Leopard implies Foraminifera 9" that, qued, "Boomer Duke implies Foraminifera 9" . . . if I had not forgotten this, I say, I should not have been "deceived." For in practice they were as little favorable to me as the Leopards. A certain member of their party reached a position behind me.

I quickly perceived that his intention was not favorable, and attempted to turn around in order to discharge at him with the Stollgratz 16, but he was very rapid. He had a metallic cylinder, and with it struck my head, knocking "me" unconscious.

THE DAY OF THE BOOMER DUKES

II

Shield 8805

THIS CANDY STORE is called Chris's. There must be ten thousand like it in the city. A marble counter with perhaps five stools, a display case of cigars and a bigger one of candy, a few dozen girlie magazines hanging by clothespin-sort-of things from wire ropes along the wall. It has a couple of very small glass-topped tables under the magazines. And a juke — I can't imagine a place like Chris's without a juke.

I had been sitting around Chris's for a couple of hours, and I was beginning to get edgy. The reason I was sitting around Chris's was not that I liked Cokes particularly, but that it was one of the hanging-out places of a juvenile gang called The Leopards, with whom I had been trying to work for nearly a year; and the reason I was becoming edgy was that I didn't see any of them there.

The boy behind the counter — he had the same first name as I, Walter in both cases, though my last name is Hutner and his is, I believe, something Puerto Rican — the boy behind the counter was dummying up, too. I tried to talk to him, on and off, when he wasn't busy. He wasn't busy most of the time; it was too cold for sodas. But he just didn't

want to talk. Now, these kids love to talk. A lot of what they say doesn't make sense — either bullying, or bragging, or purposeless swearing — but talk is their normal state; when they quiet down it means trouble. For instance, if you ever find yourself walking down 'Thirty-fifth Street and a couple of kids pass you, talking, you don't have to bother looking around; but if they stop talking, turn quickly. You're about to be mugged. Not that Walt was a mugger — as far as I know; but that's the pattern of the enclave.

SO HIS being quiet was a bad sign. It might mean that a rumble was brewing — and that meant that my work so far had been pretty nearly a failure. Even worse, it might mean that somehow the Leopards had discovered that I had at last passed my examinations and been appointed to the New York City Police Force as a rookie patrolman, Shield 8805.

Trying to work with these kids is hard enough at best. They don't like outsiders. But they particularly hate cops, and I had been trying for some weeks to decide how I could break the news to them.

The door opened. Hawk stood there. He didn't look at me, which was a bad sign. Hawk was one of the youngest in the Leopards, a skinny, very dark kid

FUTURE SCIENCE FICTION

who had been reasonably friendly to me. He stood in the open door, with snow blowing in past him. "Walt. Out here, man."

It wasn't me he meant — they call me "Champ," I suppose because I beat them all shooting eight-ball pool. Walt put down the comic he had been reading and walked out, also without looking at me. They closed the door.

TIME PASSED. I saw them through the window, talking to each other, looking at me. It was something, all right. They were scared. That's bad, because these kids are like wild animals; if you scare them, they hit first — it's the only way they know to defend themselves. But on the other hand, a rumble wouldn't scare them — not where they would show it; and finding out about the shield in my pocket wouldn't scare them, either. They hated cops, as I say; but cops were a part of their environment. It was strange, and baffling.

Walt came back in, and Hawk walked rapidly away. Walt went behind the counter, lit a cigaret, wiped at the marble top, picked up his comic, put it down again and finally looked at me. He said: "Some punk busted Fayó and a couple of the boys. It's real trouble."

I didn't say anything.

He took a puff on his cigaret.

"They're chilled, Champ. Five of them."

"Chilled? Dead?" It sounded bad; there hadn't been a real rumble in months, not with a killing.

He shook his head. "Not dead. You're wanting to see, you go down Gomez's cellar. Yeah, they're all stiff but they're breathing. I be along soon as the old man comes back in the store."

He looked pretty sick. I left it at that and hurried down the block to the tenement where the Gomez family lived, and then I found out why.

THEY WERE sprawled on the filthy floor of the cellar like winoes in an alley. Fayó, who ran the gang; Jap; Baker; two others I didn't know as well. They were breathing, as Walt had said, but you just couldn't wake them up.

Hawk and his twin brother, Yogi, were there with them, looking scared. I couldn't blame them. The kids looked perfectly all right, but it was obvious that they weren't. I bent down and smelled, but there was no trace of liquor or anything else on their breath.

I stood up. "We'd better get a doctor."

"Nay. You call the meat wagon, and a cop comes right with it, man," Yogi said, and his brother nodded.

I laid off that for a moment. "What happened?"

THE DAY OF THE BOOMER DUKES

Hawk said, "You know that witch Gloria, goes with one of the Boomer Dukes? She opened her big mouth to my girl. Yeah, opened her mouth and much bad talk came out. Said Fayó primed some jumper with a zip and the punk cooled him, and then a couple of the Boomers moved in real cool. Now they got the punk with the zip and much other stuff, real stuff."

"What kind of stuff?"

Hawk looked worried. He finally admitted that he didn't know what kind of stuff, but it was something dangerous in the way of weapons. It had been the "zip" that had knocked out the five Leopards.

I sent Hawk out to the drug-store for smelling salts and containers of hot black coffee — not that I knew what I was doing, of course, but they were dead set against calling an ambulance. And the boys didn't seem to be in any particular danger, only sleep.

HOWEVER, even then I knew that this kind of trouble was something I couldn't handle alone. It was a tossup what to do — the smart thing was to call the precinct right then and there; but I couldn't help feeling that that would make the Leopards clam up hopelessly. The six months I had spent trying to work with them had not been too successful — a lot of the

other neighborhood workers had made a lot more progress than I — but at least they were willing to talk to me; and they wouldn't talk to uniformed police.

Besides, as soon as I had been sworn in, the day before, I had begun the practice of carrying my .38 at all times, as the regulations say. It was in my coat. There was no reason for me to feel I needed it. But I did. If there was any truth to the story of a "zip" knocking out the boys — and I had all five of them right there for evidence — I had the unpleasant conviction that there was real trouble circulating around East Harlem that afternoon.

"Champ. They all waking up!"

I turned around, and Hawk was right. The five Leopards, all of a sudden, were stirring and opening their eyes. Maybe the smelling salts had something to do with it, but I rather think not.

We fed them some of the black coffee, still reasonably hot. They were scared; they were more scared than anything I had ever seen in those kids before. They could hardly talk at first, and when finally they came around enough to tell me what had happened I could hardly believe them. This man had been small and peculiar, and he had been looking for, of all things, the "Mafia," which he had read

FUTURE SCIENCE FICTION

about in history books — *old* history books.

Well, it didn't make sense, unless you were prepared to make a certain assumption that I refused to make. Man from Mars? Nonsense. Or from the future? Equally ridiculous. . . .

THEN THE five Leopards, re-viving, began to walk around. The cellar was dark and dirty, and packed with the accumulation of generations in the way of old furniture and rat-inhabited mattresses and piles of newspapers; it wasn't surprising that we hadn't noticed the little gleaming thing that had apparently rolled under an abandoned potbelly stove.

Jap picked it up, squalled, dropped it and yelled for me.

I touched it cautiously, and it tingled. It wasn't painful, but it was an odd, unexpected feeling — perhaps you've come across the "buzzers" that novelty stores sell which, concealed in the palm, give a sudden, surprising tingle when the owner shakes hands with an unsuspecting friend. It was like that, like a mild electric shock. I picked it up and held it. It gleamed brightly, with a light of its own; it was round; it made a faint droning sound; I turned it over, and it spoke to me. It said in a friendly, feminine *w h i s p e r*: *Warning, this portatron attuned only to Bailey's Beam percepts.*

Remain quiescent until the Adjuster comes.

That settled it. Any time a lit-up cue ball talks to me, I refer the matter to higher authority. I decided on the spot that I was heading for the precinct house, no matter what the Leopards thought.

But when I turned and headed for the stairs, I couldn't move. My feet simply would not lift off the ground. I twisted, and stumbled, and fell in a heap; I yelled for help, but it didn't do any good. The Leopards couldn't move either.

We were stuck there in Gomez's cellar, as though we had been nailed to the filthy floor.

III

Cow

WHEN I SEE what this flunky has done to them Leopards, I call him a cool cat right away. But then we jump him and he ain't so cool. Angel and Tiny grab him under the arms and I'm grabbing the stuff he's carrying. Yeah, we get out of there.

There's bulls on the street, so we cut through the back and over the fences. Tiny don't like that. He tells me, "Cow. What's to leave this cat here? He must weigh eighteen tons." "You're bringing him," I tell him, so he shuts up. That's how it is in the

THE DAY OF THE BOOMER DUKES

Boomer Dukes. When Cow talks, them other flunkies shut up fast.

We get him in the loft over the R. and I. Social Club. Damn, but it's cold up there. I can hear the pool balls clicking down below so I pass the word to keep quiet. Then I give this guy the foot and pretty soon he wakes up.

As soon as I talk to him a little bit I figure we had luck riding with us when we see them Leopards. This cat's got real bad stuff. Yeah, I never hear of anything like it. But what it takes to make a fight he's got. I take my old pistol and give it to Tiny. Hell, it makes him happy and what's it cost me? Because what this cat's got makes that pistol look like something for babies.

FIRST HE don't want to talk. "Stomp him," I tell Angel, but he's scared. He says, "Nay. This is a real weird cat, Cow. I'm for cutting out of here."

"Stomp him," I tell him again, pretty quiet, but he does it. He don't have to tell me this cat's weird, but when the cat gets the foot a couple of times he's willing to talk. Yeah, he talks real funny, but that don't matter to me. We take all the loot out of his bag, and I make this cat tell me what it's to do. Damn, I don't know what he's talking about one time out of six, but I know enough. Even Tiny catches

on after a while, because I see him put down that funky old pistol I gave him that he's been loving up.

I'm feeling pretty good. I wish a couple of them chicken Leopards would turn up so I could show them what they missed out on. Yeah, I'll take on them, and the Black Dogs, and all the cops in the world all at once — that's how good I'm feeling. I feel so good that I don't even like it when Angel lets out a yell and comes up with a wad of loot. It's like I want to prime the U.S. Mint for chickenfeed, I don't want it to come so easy.

But money's on hand, so I take it off Angel and count it. This cat was really loaded; there must be a thousand dollars here.

I take a handful of it and hand it over to Angel real cool. "Get us some charge," I tell him. "There's much to do and I'm feeling ready for some charge to do it with."

"How many sticks you want me to get?" he asks, holding on to that money like he never saw any before.

I tell him: "Sticks? Nay. I'm for real stuff tonight. You find Four-Eye and get us some horse." Yeah, he digs me then. He looks like he's pretty scared and I know he is, because this punk hasn't had anything bigger than reefers in his life. But I'm for busting a couple of caps of

FUTURE SCIENCE FICTION

H, and what I do he's going to do. He takes off to find Four-Eye and the rest of us get busy on this cat with the funny artillery until he gets back.

IT'S LIKE I'm a million miles down Dream Street. Hell, I don't want to wake up.

But the H is wearing off and I'm feeling mean. Damn, I'll stomp my mother if she talks big to me right then.

I'm the first one on my feet and I'm looking for trouble. The whole place is full now. Angel must have passed the word to everybody in the Dukes, but I don't even remember them coming in. There's eight or ten cats lying around on the floor now, not even moving. This won't do, I decide.

If I'm on my feet, they're all going to be on their feet. I start to give them the foot and they begin to move. Even the weirdie must've had some H. I'm guessing that somebody slipped him some to see what would happen, because he's off on Cloud Number Nine. Yeah, they're feeling real mean when they wake up, but I handle them cool. Even that little flunky Sailor starts to go up against me but I look at him cool and he chickens. Angel and Pete are real sick, with the shakes and the heaves, but I ain't waiting for them to feel good. "Give me that loot," I tell Tiny, and he hands over the stuff

we took off the weirdie. I start to pass out the stuff.

"What's to do with this stuff?" Tiny asks me, looking at what I'm giving him.

I tell him, "Point it and shoot it." He isn't listening when the weirdie's telling me what the stuff is. He wants to know what it does, but I don't know that. I just tell him, "Point it and shoot it, man." I've sent one of the cats out for drinks and smokes and he's back by then, and we're all beginning to feel a little better, only still pretty mean. They begin to dig me.

"Yeah, it sounds like a rumble," one of them says, after a while.

I give him the nod, cool. "You're calling it," I tell him. "There's much fighting tonight. The Boomer Dukes is taking on the world!"

IV

Sandy Van Pelt

THE FRONT office thought the radio car would give us a break in spot news coverage, and I guessed as wrong as they did. I had been covering City Hall long enough, and that's no place to build a career—the Press Association is very tight there, there's not much chance of getting any kind of exclusive story because of the sharing agreements. So I put in

THE DAY OF THE BOOMER DUKES

for the radio car. It meant taking the night shift, but I got it.

I suppose the front office got their money's worth, because they played up every lousy auto smash the radio car covered as though it were the story of the Second Coming, and maybe it helped circulation. But I had been on it for four months and, wouldn't you know it, there wasn't a decent murder, or sewer explosion, or running gun fight between six P.M. and six A.M. any night I was on duty in those whole four months. What made it worse, the kid they gave me as photographer — Sol Detweiler, his name was — couldn't drive worth a damn, so I was stuck with chauffeuring us around.

We had just been out to LaGuardia to see if it was true that Marilyn Monroe was sneaking into town with Aly Khan on a night plane — it wasn't — and we were coming across the Triborough Bridge, heading south toward the East River Drive, when the office called. I pulled over and parked and answered the radiophone.

IT WAS Harrison, the night City Editor. "Listen, Sandy, there's a gang fight in East Harlem. Where are you now?"

It didn't sound like much to me, I admit. "There's always a gang fight in East Harlem, Harrison. I'm cold and I'm on my

way down to Night Court, where there may or may not be a story; but at least I can get my feet warm."

"Where are you now?" Harrison wasn't fooling. I looked at Sol, on the seat next to me; I thought I had heard him snicker. He began to fiddle with his camera without looking at me. I pushed the "talk" button and told Harrison where I was. It pleased him very much; I wasn't more than six blocks from where this big rumble was going on, he told me, and he made it very clear that I was to get on over there immediately.

I pulled away from the curb, wondering why I had ever wanted to be a newspaperman; I could have made five times as much money for half as much work in an ad agency. To make it worse, I heard Sol chuckle again. The reason he was so amused was that when we first teamed up I made the mistake of telling him what a hot reporter I was, and I had been visibly cooling off before his eyes for a better than four straight months.

Believe me, I was at the very bottom of my career that night. For five cents cash I would have parked the car, thrown the keys in the East River, and taken the first bus out of town. I was absolutely positive that the story would be a bust and all I would get out of it would be a bad cold

FUTURE SCIENCE FICTION

from walking around in the snow.

And if that doesn't show you what a hot newspaperman I really am, nothing will.

SOL BEGAN to act interested as we reached the corner Harrison had told us to go to. "That's Chris's," he said, pointing at a little candy store. "And that must be the pool hall where the Leopards hang out."

"You know this place?"

He nodded. "I know a man named Walter Hutner. He and I went to school together, until he dropped out, couple weeks ago. He quit college to go to the Police Academy. He wanted to be a cop."

I looked at him. "You're going to college?"

"Sure, Mr. Van Pelt. Wally Hutner was a sociology major — I'm journalism — but we had a couple of classes together. He had a part-time job with a neighborhood council up here, acting as a sort of adult adviser for one of the gangs."

"They need advice on how to be gangs?"

"No, that's not it, Mr. Van Pelt. The councils try to get their workers accepted enough to bring the kids in to the social centers, that's all. They try to get them off the streets. Wally was working with a bunch called the Leopards."

I shut him up. "Tell me about

it later!" I stopped the car and rolled down a window, listening.

YES, THERE WAS something going on all right. Not at the corner Harrison had mentioned — there wasn't a soul in sight in any direction. But I could hear what sounded like gunfire and yelling, and, my God, even bombs going off! And it wasn't too far away. There were sirens, too — squad cars, no doubt.

"It's over that way!" Sol yelled, pointing. He looked as though he was having the time of his life, all keyed up and delighted. He didn't have to tell me where the noise was coming from, I could hear for myself. It sounded like D-Day at Normandy, and I didn't like the sound of it.

I made a quick decision and slammed on the brakes, then backed the car back the way we had come. Sol looked at me. "What —"

"Local color," I explained quickly. "This the place you were talking about? Chris's? Let's go in and see if we can find some of these hoodlums."

"But, Mr. Van Pelt, all the pictures are over where the fight's going on!"

"Pictures, shmictures! Come on!" I got out in front of the candy store, and the only thing he could do was follow me.

Whatever they were doing,

THE DAY OF THE BOOMER DUKES

they were making the devil's own racket about it. Now that I looked a little more closely I could see that they must have come this way; the candy store's windows were broken; every other street light was smashed; and what had at first looked like a flight of steps in front of a tenement across the street wasn't anything of the kind — it was a pile of bricks and stone from the false-front cornice on the roof! How in the world they had managed to knock that down I had no idea; but it sort of convinced me that, after all, Harrison had been right about this being a *big* fight. Over where the noise was coming from there were queer flashing lights in the clouds overhead — reflecting exploding flares, I thought.

NO, I DIDN'T want to go over where the pictures were. I like living. If it had been a normal Harlem rumble with broken bottles and knives, or maybe even home-made zip guns — I might have taken a chance on it, but this was for real.

"Come on," I yelled to Sol, and we pushed the door open to the candy store.

At first there didn't seem to be anyone in, but after we called a couple times a kid of about sixteen, coffee-colored and scared-looking, stuck his head up above the counter.

"You. What's going on

here?" I demanded. He looked at me as if I was some kind of a two-headed monster. "Come on, kid. Tell us what happened."

"Excuse me, Mr. Van Pelt." Sol cut in ahead of me and began talking to the kid in Spanish. It got a rise out of him; at least Sol got an answer. My Spanish is only a little bit better than my Swahili, so I missed what was going on, except for an occasional word. But Sol was getting it all. He reported: "He knows Walt; that's what's bothering him. He says Walt and some of the Leopards are in a basement down the street, and there's something wrong with them. I can't exactly figure out what, but —"

"The hell with them. What about *that*?"

"You mean the fight? Oh, it's a big one all right, Mr. Van Pelt. It's a gang called the Boomer Dukes. They've got hold of some real guns somewhere — I can't exactly understand what kind of guns he means, but it sounds like something serious. He says they shot that parapet down across the street. Gosh, Mr. Van Pelt, you'd think it'd take a cannon for something like that. But it has something to do with Walt Hutner and all the Leopards, too."

I said enthusiastically, "Very good, Sol. That's fine. Find out where the cellar is, and we'll go interview Hutner."

FUTURE SCIENCE FICTION

"But Mr. Van Pelt, the pictures —"

"Sorry. I have to call the office." I turned my back on him and headed for the car.

THE NOISE was louder, and the flashes in the sky brighter — it looked as though they were moving this way. Well, I didn't have any money tied up in the car, so I wasn't worried about leaving it in the street. And somebody's cellar seemed like a very good place to be. I called the office and started to tell Harrison what we'd found out; but he stopped me short. "Sandy, where've you been? I've been trying to call you for — Listen, we got a call from Fordham. They've detected radiation coming from the East Side — it's got to be what's going on up there! Radiation, do you hear me? That means atomic weapons! Now, you get th—"

Silence.

"Hello?" I cried, and then remembered to push the talk button. "Hello? Harrison, you there?"

Silence. The two-way radio was dead.

I got out of the car; and maybe I understood what had happened to the radio and maybe I didn't. Anyway, there was something new shining in the sky. It hung below the clouds in parts, and I could see it through the bottom of the clouds in the mid-

dle; it was a silvery teacup upside down, a hemisphere over everything.

It hadn't been there two minutes before.

I HEARD FIRING coming closer and closer. Around a corner a bunch of cops came, running, turning, firing; running, turning and firing again. It was like the retreat from Caporetto in miniature. And what was chasing them? In a minute I saw. Coming around the corner was a kid with a lightning-blue satin jacket and two funny-looking guns in his hand; there was a silvery aura around him, the same color as the lights in the sky; and I swear I saw those cops' guns hit him twenty times in twenty seconds, but he didn't seem to notice.

Sol and the kid from the candy store were right beside me. We took another look at the one-man army that was coming down the street toward us, laughing and prancing and firing those odd-looking guns. And then the three of us got out of there, heading for the cellar. Any cellar.

V

Priam's Maw

MY OCCUPATION was "short-order cook", as it is called. I practiced it in a locus entitled "The White

THE DAY OF THE BOOMER DUKES



Heaven," established at Fifth Avenue, Newyork, between 1949 and 1962 C.E. I had created rapport with several of the aboriginals, who addressed me as Bessie, and presumed to approve the manner in which I heated specimens of minced ruminant quadruped flesh (deceased to be sure). It was a satisfactory guise, although tiring.

Using approved techniques, I was compiling anthropometric data while "I" was, as they say, "brewing coffee." I deem the probability nearly conclusive that it was the double duty, plus the datum that, as stated, "I" was physically tired, which caused me to overlook the first signal from my portatron. Indeed, I might have overlooked the sec-

ond as well except that the aboriginal named Lester stated: "Hey, Bessie. Ya got an alarm clock in ya pocketbook?" He had related the annunciator signal of the portatron to the only significant datum in his own experience which it resembled, the ringing of a bell.

I annotated his dossier to provide for his removal in case it eventuated that he had made an undesirable intuit (this proved unnecessary) and retired to the back of the "store" with my carry-all. On identifying myself to the portatron, I received information that it was attuned to a Bailey's Beam, identified as Foraminifera 9-Hart, who had refused treatment for systemic weltschmerz and instead sought to relieve his boredom by adventuring into this era.

I thereupon compiled two recommendations which are attached: 2, a proposal for reprimand to the Keeper of the Learning Lodge for failure to properly annotate a volume entitled *U.S.A. Confidential* and, 1, a proposal for reprimand to the Transport Executive, for permitting Bailey's Beam-class personnel access to temporal transport. Meanwhile, I left the "stone" by a rear exit and directed myself toward the locus of the transmitting portatron.

I HAD proximately left when I received an additional infor-

FUTURE SCIENCE FICTION

mation, namely that developed weapons were being employed in the area toward which I was directing. This provoked that I abandon guise entirely. I went transparent and quickly examined all aboriginals within view, to determine if any required removal; but none had observed this. I rose to perhaps seventy-five meters and sped at full atmospheric driving speed toward the source of the alarm. As I crossed a "park" I detected the drive of another Adjuster, whom I determined to be Alephplex Priam's Maw — that is, my father. He bespoke me as follows: "Hurry, Bsepsex Priam's Maw. That crazy Foraminifera has been captured by aboriginals and they have taken his weapons away from him." "Weapons?" I inquired. "Yes, weapons," he stated, "for Foraminifera 9-Hart brought with him more than forty-three kilograms of weapons, ranging up to and including electronic."

I recorded this datum and we landed, went opaque in the shelter of a doorway and examined our percepts. "Quarantine?" asked my father, and I had to agree. "Quarantine," I voted, and he opened his carry-all and set-up a quarantine shield on the console. At once appeared the silvery quarantine dome, and the first step of our adjustment was completed. Now to isolate, remove, replace.

Queried Alephplex: "An Adjuster?" I observed the phenomenon to which he was referring. A young, dark aboriginal was coming toward us on the "street," driving a group of police aboriginals before him. He was armed, it appeared, with a fission-throwing weapon in one hand and some sort of tranquilizer — I deem it to have been a Stollgratz 16 — in the other; moreover, he wore an invulnerability belt. The police aboriginals were attempting to strike him with missile weapons, which the belt deflected. I neutralized his shield, collapsed him and stored him in my carry-all. "Not an Adjuster," I asserted my father, but he had already perceived that this was so. I left him to neutralize and collapse the police aboriginals while I zeroed in on the portatron. I did not envy him his job with the police aboriginals, for many of them were "dead," as they say. It required the most delicate adjustments.

THE PORTATRON developed to be in a "cellar" and with it were some nine or eleven aboriginals which it had immobilized pending my arrival. One spoke to me thus: "Young lady, please call the cops! We're stuck here, and —" I did not wait to hear what he wished to say further, but neutralized and collapsed him with the other aboriginals. The portatron apol-

THE DAY OF THE BOOMER DUKES

ogized for having caused me inconvenience; but of course it was not its fault, so I did not neutralize it. Using it for d-f, I quickly located the culprit, Foraminifera 9-Hart Bailey's Beam, nearby. He spoke despairingly in the dialect of the locus, "Besplex Priam's Maw, for God's sake get me out of this!" "Out!" I spoke to him, "you'll wish you never were 'born,' as they say!" I neutralized but did not collapse him, pending instructions from the Central Authority. The aboriginals who were with him, however, I did collapse.

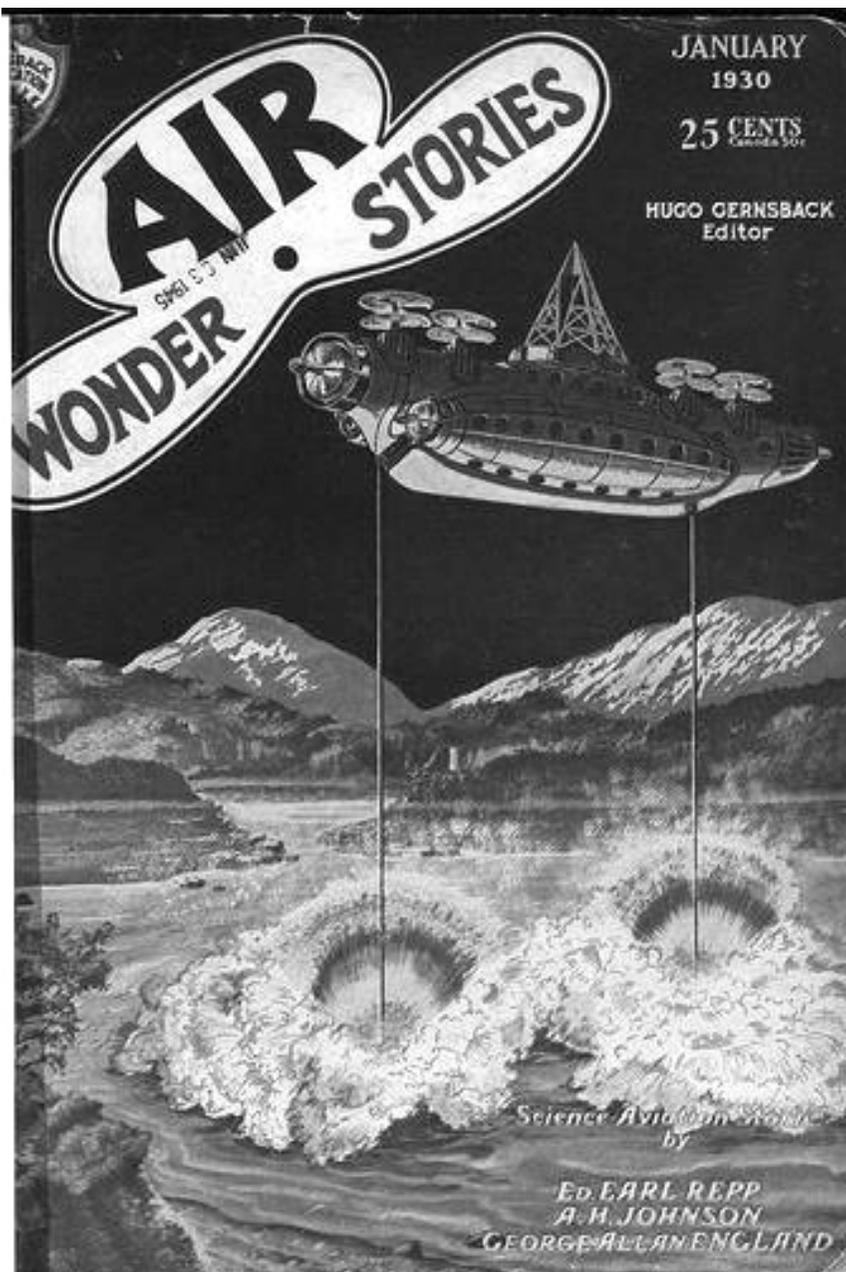
Presently arrived Alephplex, along with four other Adjusters who had arrived before the quarantine shield made it not possible for anyone else to enter the disturbed area. Each one of us had had to abandon guise, so that this locus of Newyork 1939-1986 must require new Adjusters to replace us — a matter to be charged against the guilt of Foraminifera 9-Hart Bailey's Beam, I deem.

THIS CONCLUDED Steps 3 and 2 of our Adjustment, the removal and the isolation of the disturbed specimens. We are transmitting same disturbed specimens to you under separate cover herewith, in neutralized and collapsed state, for the manufacture of simulacra there-

of. One regrets to say that they number three thousand eight hundred forty-six, comprising all aboriginals within the quarantined area who had first-hand knowledge of the anachronisms caused by Foraminifera's importation of contemporary weapons into this locus.

Alephplex and the four other Adjusters are at present reconstructing such physical damage as was caused by the use of said weapons. Simultaneously, while I am preparing this report, "I" am maintaining the quarantine shield which cuts off this locus, both physically and temporally, from the remainder of its environment. I deem that if replacements for the attached aboriginals can be fabricated quickly enough, there will be no significant outside percept of the shield itself, or of the happenings within it — that is, by maintaining a quasi-stasis of time while the repairs are being made, an outside aboriginal observer will see, at most, a mere flicker of silver in the sky. All Adjusters here present are working as rapidly as we can to make sure the shield can be withdrawn, before so many aboriginals have observed it as to make it necessary to replace the entire city with simulacra. We do not wish a repetition of the California incident, after all.







Neil R. Jones is little remembered today, although he should be. He is credited with coining words and coming up with ideas that are in general use today. He was one of the first writers to use cybernetic and robotic characters (Isaac Asimov coined the word “robotics”), as well as the “future history” concept later used by Robert Heinlein and Cordwainer Smith.

Writing was not Jones’ primary source of income; he was a bureaucrat for the state of New York, working as an unemployment insurance claims investigator. That certainly explains the small number of his works, since it’s hard to concentrate on writing when one has to work for a living. But his influence on the twenty first century’s lexicon can’t be denied.

He was born on May 29, 1909 in Fulton, New York and served in the military from 1940 to 1942. He retired from service to New York in 1973, and died a month away from his seventy fifth birthday in 1988.

Jones was best known for his “Professor Jameson” series of stories, the “future history”. It is claimed that the Jameson stories were Gene Roddenberry’s inspiration for many of the technologies and alien characters in the *Star Trek* TV shows and movies.

Syracuse University houses a collection of his manuscripts, diaries, scrapbooks, correspondence, photo albums, and memorabilia. The collection includes 250 volumes of Jones’ personal diary spanning more than fifty years, as well as the typewriter he wrote them on.

Claimed by many sources to not have been very prolific, he wrote at least fifty stories in his twenty one years of

writing. In his book *Before the Golden Age: A Science Fiction Anthology of the 1930s*, Isaac Asimov notes that he was profoundly influenced by Jones' work.

His first story is next, *The Death's Head Meteor*. It has the first known use of the word "astronaut". This particular story is exactly as published in January 1930, with images scanned from the original *Air Wonder Stories* magazine.

The DEATH'S HEAD Meteor

by Neil R. Jones



(Illustration by Winter)

The head was composed of three huge meteors better than two hundred feet thick, with rough sides resembling miniature mountains careening through space. In the wake of the first three came smaller ones.

THE DEATH'S HEAD METEOR

HIGH up, on the top floor of a hundred-story building sat a man at a desk. Before him was an array of dials, a system of switches and intricate electrical appliances. Several hundred glass bulbs of various sizes flashed on and off intermittently in the wall over his desk. Fitting over the top of his head and around his ears was a shining, silver cap with a wire leading from the top to the apparatus before him. He was one of the world's interplanetary radio operators of the twenty-sixth century, sending and receiving daily messages between Mars and the Earth.

One of the largest glass bulbs suddenly shot into brilliance, and with a fierce crackling, an electric spark closed the gap between two metal cylinders, which paralleled one another about a foot apart. At the same time, the operator leaned forward, and with practiced hand, quickly manipulated several of the dials to various points, after which he threw one of the switches into place. A low droning sound filled the room, and a large cylinder upon which was rolled a continuous sheet of thin aluminum began to slowly revolve. As the brilliant blue-white flare in the glass bulb died away, the droning noise turned to a high keyed whine which broke off abruptly. The cylinder stopped while the multitude of tiny glass bulbs again glowed separately at intervals, as they had been doing just before the message had come in.

The operator shoved a lever at his side, and a small roller cut across the large cylinder, releasing a sheet of the thin aluminum which fell on to the desk before him. Cut through its thin metal texture was the message from Mars in the three universal languages of the Earth. The radio operator now turned his attention to a smooth plate which rested in the shape of a semi-circle about two feet long and half as wide. On the flat side of the thick composition plate, a black screen arose several feet in a vertical plane at a right angle to the plate, so that the screen faced the operator. Placing the aluminum sheet upon the plate, the operator threw another switch, simultaneously pressing a button marked "Meteorological Bureau." The screen suddenly glowed, throwing a series of orange-hued rays on a slant down upon the plate bearing the narrow sheet of aluminum which grew indistinct, finally fading, until it disappeared from sight. The radio man threw back the switch once more and the screen grew black again. The plate was now as empty and bare as before he

had laid the message upon its surface.

In the Meteorological Bureau, two thousand miles away, the officials read the message from the aluminum sheet which had been transmitted by radio. One of them, an elderly man, walked over to the end of the room, the wall of which was bordered into a squared shape by panels. The color of the wall inside the dark panelling was a dull gray. He advanced to a round, metal, inlaid section of the floor. As soon as his feet came in contact with the metal, a picture suddenly flashed upon the surface of the wall, and the sounds of exclamations and loud laughter broke in upon his ears. The elderly scientist was looking into a comfortable room fitted up with lounges and easy chairs. Four young men were the sole occupants, being engaged in a game at one of the tables in the room.

The game ceased as the four came to sudden attention, facing their superior who now spoke.

"Jan Trenton."

"Here, sir."

"Get your ship ready for instant duty. I have a message from the Martian observatory at Fomar which states that several large meteors are approaching from the region of Jupiter and the asteroid group. It states that they will pass close to Mars to-night at 23:43, Earth time, two hundred thousand miles above its South Pole. From past experience, you know what is required of you. Bring back samples for the Bureau to analyze as well as any precious stones or metals you may discover."

The scientist turned towards his companions once more, and as his feet left the metal section of the floor, the picture immediately disappeared and the television screen was once more replaced by the somber, gray color.

At the space ship base, in the same huge city which held the Meteorological Bureau, Jan Trenton prepared for his trip. Getting into a private elevator, he propelled himself at a dizzy speed up through the interior of the tall building to the roof. The last five stories were open-air landing bases for the aircraft and space flyers. The first level was for the air flyers which

plied among the ports of the Earth; the second was reserved for space ship freight carriers going to and from Mars; the third housed the freight ships which worked between Venus and the Earth; while the fourth was left to passenger service between the Earth and the two planets. The top landing level was used for miscellaneous purposes, the Meteorological Bureau



NEIL R. JONES

SLOWLY the human race is emerging from its earthbound traditions and is casting its eyes towards the heavens. It was not so many years ago that weather changes were little understood, and there was much misinformation connected with them during the past twenty-five years. We have just begun investigating the atmospheric ocean, and we are slowly arriving at a point where long range forecasting becomes possible.

As soon as our activities are extended beyond our earth it will become necessary to send space flyers to chart the open spaces for scientific research. It is already known that the space between the earth and the sun contains a good deal of foreign matter, such as meteors, and even immense meteoric dust clouds. These, in cutting off the radiation of the sun, exert a tremendous influence upon our weather conditions. Furthermore, such meteors may contain strange and valuable elements. It is the exploration for such things that our author has used as a basis for his aviation story of outer space. And, incidentally, it is a story which will keep you on the jump right through.

AIR WONDER STORIES

controlling a section of it for their use.

Off Into Space

AS Jan gained the roof, he found everything hustle and bustle, with space flyers and terrestrial aircraft coming and going. He went to the hangar of the Meteorological Bureau and entered. A long line of small space flyers stood side by side. Like the larger space ships, they used the same means of power, that supplied by atomic energy. A terrific speed could be obtained in outer space, and the fantastic speed of the Earth and the other cosmic wanderers of space might well be likened to the space flyers as the speed of a turtle is compared to that of a jackrabbit.

The young astronaut approached his tiny space flyer. It was shaped like an egg, except that it was more elongated, and the two ends tapered down to blunt points instead of being rounded. It was mounted upon four revolving metal spheres set into its keel instead of wheels as landing gear. It was especially adapted for the use of exploring meteors, for all sides were studded with grapples and jointed drills as well as claw-like iron rods. These latter, which were also jointed, were capable of acting in the capacity of fingers in grasping material and placing it into the receptacles which lined the sides of the little space car. All of the exterior apparatus was manipulated by mechanical control from within.

Jan inspected his oxygen tanks and fuel supply, and tested out the mechanism of the craft which he found to be working perfectly. He called an attendant, and together they wheeled the craft out upon the roof level which was bathed in the warm sunshine of a June morning. The young astronaut entered the space flyer, closed the door, and was alone in the air-tight compartment just large enough to accommodate him. On the instrument board before him were dials, levers, gauges, buttons and queer apparatus which controlled and operated the various features of the craft. He turned on his oxygen supply and his air rejuvenator so that the air could be used more than once, after which he shoved his starting lever forward. The craft raced suddenly off the roof and into the cloudless sky above the vast city of the twenty-sixth century.

Up and up he arose, until those upon the roof lost sight of his flyer as it disappeared, a minute speck against the deep blue of the sky. Below him, the city could be seen as an indistinct, white blur upon a background of green. Farther and farther he rose until he was in the rarefied atmosphere of the upper air currents. It grew intensely cold, and the young astronaut found it necessary to turn on the heating system. He now increased his speed from an even 300 miles an hour gradually to 1,000 miles an hour until he should find himself beyond the friction of the Earth's atmosphere. At this speed, it was but a short time before the tiny space flyer found itself in the vacuum of outer space. The little craft had six windows of a thick glass-like substance which was colored a deep transparent brown to nullify the blinding glare of the sun. The windows pointed in six different directions, and it was from these that Jan noticed the daylight ebbing, to be replaced by the utter blackness of night, except where the blazing ball of the sun shone through the brown glass windows. Through one window, he could see the curved contour of the Earth which he was so rapidly leaving, while from each of the other five windows the dazzling brilliance of the clustered stars shone with an iridescent gleam never seen upon Earth.

Jan did not notice the beauties and wonders of outer

space, for he had seen them many times before, and so he watched his instrument board, increasing his speed until he hurtled through space in the direction of Mars at the rate of two thousand miles per second, eating up the distance at more than seven million miles per hour. While he was in the vicinity of the Earth, a steady stream of small meteorites beat a tattoo upon the space ship, but as he left the Earth farther behind, the meteorites with which he came in contact were few. Many of them were large, and traveling at the rate of ten to twenty miles per second could have damaged his flyer. But an instrument recorded the approach of the large ones, and when one came within a distance of ten thousand miles, a small bell inside the craft started ringing, while a small arrow in a glass case pointed out its direction.

The young astronaut sped on through the ether void for the equivalent of an Earth day. Through space it was eternal night, with a sun shining from out of the blackness. Immeasurable distances off in all directions were millions of suns and worlds. On ahead of him Mars was growing from a dull red point of fire to a rose-colored sphere, appearing as large as the moon does from the Earth. The rotating sphere grew larger, in proportion to the speed of his approach, its two twinkling satellites becoming visible, one just below, and the other to one side, of the planet. Behind him, he saw the Earth as a large, green star of the first magnitude, and on looking sharper, he saw an accompanying point of light beside it.

Jan would have liked very much to have landed on Mars so that he could have stretched his limbs, but he dared not, for the chronometer at his side told him that if he were to intercept the meteor train the other side of Mars, he would need all of his time. He rapidly neared the red planet which now appeared as a huge ball, filling all three of the nearest windows. Jan made a circuit around the planet, passing by the darkened half which lay sleeping under the repose of a Martian night, and continued on towards Jupiter. He sighted the South Pole on Mars, and kept his ship some two hundred thousand miles above it on a direct line towards the great planet Jupiter. He watched a dial which recorded the approach of giant meteors within a distance of a hundred thousand miles, for soon he expected the group of cosmic wanderers to come sweeping along on their aimless journey. If he missed them, it would be necessary to land on Mars and get new bearings at the observatory before he continued the chase, but he disliked doing this for it would take more time and be a reflection upon his efficiency. And Jan was working for a promotion to the passenger limited between Venus and Mars.

The Meteor Train

THE bell tinkled! He looked at the dial and saw that the needle pointed straight ahead of him upon the course he was pursuing. The company of meteors were rushing toward him head on. He turned his flyer on a slant, and slackened his speed continuously for hours until finally it was down to twenty miles per second. He was rushing off at an acute angle so that he would avoid a possible collision. He watched the needle and saw that the train of meteors would soon be opposite him. He was careful to place himself on the sunward side of their approach, for had he been on the opposite side, they would have passed within a few feet of his flyer and he would have been unaware of it, except that his dials would have announced their proximity. He now watched the dial which recorded

THE DEATH'S HEAD METEOR

the smaller number of miles, and saw that the meteors were a thousand miles distant. Turning his flyer back in the direction from which he had come, he ran parallel to the course the celestial bodies would pursue, slackening his speed down to ten miles per second. The distance, as his dial informed him, was rapidly being decreased by the oncoming meteor train. It was now within five hundred miles of him, uncomfortably close, considering the fact that he was not entirely certain of its speed. The astronaut was traveling ten miles per second in the same direction as the meteors' course, and the cluster comprising the meteor train was bearing down upon him, so he figured that it must be traveling at approximately fifteen miles per second. He tested it by speeding up his space flyer to the same rate; it gained on him slightly. The young astronaut decided to allow it to pass him, and then come up from behind; so continuing at fifteen miles per second, he awaited its passing, five miles from its course.

He saw it only as a sudden indistinct flicker, for it passed at a speed greater by three thousand miles per hour than his own. Increasing his speed, he began to creep up behind the meteor cluster, preparing for his hazardous work of running alongside one of the meteors at the same exact speed, and hooking on with his grapples. It required nerve, precision and dexterity, and many an astronaut had met his death trying to ride a meteor in the seas of space.

He soon came within sight of the cosmic wanderers and whisked by them. It was hard work attuning his speed exactly to that of the meteor group, and as he slackened his speed, the meteors flashed past him once more, reflecting the sunlight which struck them. It was the delicate control of the little space craft which finally enabled the astronaut to ride even with the meteor train only a hundred yards away. From this distance he surveyed it. The head was composed of three huge meteors better than two hundred feet thick with rough, jagged sides, resembling miniature mountains careening through space. In the wake of the first three, came smaller ones with fragments intermingled with dust.

The young astronaut singled out the nearest of the large meteors and sent his space ship in on a narrow slant which would gradually converge with the course of the meteor, bringing the two together. One hand was ready on the switch operating the grapples, while his other hand rested on the steering controls. All immediate danger would be over when he grappled on to the celestial body, but it was perilous work, requiring experience, skill and steady nerves in order to close successfully upon the giant meteor.

The sun beat its blinding light upon the rugged, uneven side of the huge meteor, throwing into sharp relief every detail. The sunlit portions lay scattered over its face, relieved by numerous shadows due to the fact that the irregular surface did not allow the sunlight to strike all of the meteor's side which faced the sun. These shadows, because the great rock lacked a surrounding atmosphere, lay etched in bold relief, so that the sunlit side of the meteor presented a series of shadows and illuminated crags to the young astronaut.

Probably the remains of an old comet, thought Jan, gazing thoughtfully at the meteor he was nearing slowly but surely. It was odd how queer it was shaped, bulging at the top, and narrowing at the bottom. Somehow, it was an unpleasant reminder of something he had seen but could not place at the moment. He was within a hundred feet of the great piece of rock, and

gradually the distance narrowed as they raced along through space together at the rate of sixteen miles a second.

Suddenly, an uncomfortable discovery forced itself upon the mind of the young astronaut. As he neared the meteor, he recognized what it resembled, and why it had stirred his memory so strangely. From a short distance away, it bore the perfect likeness of a death's head! There was the white, bulging forehead, the sloping jaws, and two huge, round shadows, with a third midway below it, for the sunken eyeholes and the nose. Most horrible of all was the mouth, bearing the fixed grin of death! The death's head glared at him malevolently, as if issuing an ominous warning!

Jan Trenton was not superstitious. Superstition had died out completely from the Earth hundreds of years ago. But the abruptness of the discovery, and its gruesome appearance startled the young astronaut and, for the first time in his career as a lone space flyer, he felt himself weighed down with an overwhelming sense of loneliness. Out in this vast depth of endless space he was millions of miles from friends and all manifestations of life with this grinning effigy, one of the freakish coincidences of the Universe, as a solitary companion. From whence had this meteor come? Probably from the region of the asteroids adjacent to Jupiter, possibly from outside the solar system, from some other system of worlds, having traveled to this destiny perhaps for the last billion years or more.

He had half a mind to swerve off from his prospective landing on the huge meteor, and couple on to one of the other two, but he laughed at himself and his unreasonable timidity. He dispelled by ridiculing himself the morbid imaginings, which had been stimulated through sight of the death's head. He prepared to go through with his original plans, despite the fact that the task was strangely distasteful.

The young astronaut was now very close, so close that the meteor towered above the little space ship. Jan stood ready at the grapple controls, waiting for the supreme moment of contact. It came with a terrific jar which threw him out of his seat against the side of the flyer, bruising him severely, just as he shoved over the grappling controls. He must have made a slight mistake in his calculations of angles, thought Jan, for he had not been prepared for the shock of the contact which greeted him. The grapples had taken hold, anyway, and he was safe for the present, at least. He feared, however, that part of his outside apparatus had been damaged in the contact, but if there was enough of it left with which to work on the meteor, he did not care, for he could have it repaired when he got back to Earth, or he might even stop at one of the Martian stations, for that matter.

Caught!

HE tested the grapple controls, the rock drills and the iron fingers, finding that over half the number on the flyer next the meteor were either broken or jammed out of shape. With the remaining exterior apparatus, he took samples of the meteor's substance, drilling out small chunks and depositing them into the receptacles along the side. The next procedure was to ascertain whether or not the meteor contained valuable metals, unknown substances or precious stones.

Before him, at the top of his instrument board were three dials ranged in a row. The central dial was a huge affair, while its two companions, one on each side, were a great deal smaller. Each of the two small dials was equipped with a small manipulator which moved

AIR WONDER STORIES

the needle around the face. The dial on the left represented the means by which the young astronaut discovered whether or not a meteor held diamonds, sapphires or other valuable stones. At various intervals around the face of the dial, the names of all precious stones known to science were marked off. By slowly moving the arrow around the dial, and pointing to the name of each individual jewel, it was possible to find out the presence of one or more of the stones. Above the dial was a small light which flashed on whenever the arrow pointed at a type of stone which was present in the meteor's mass.

The small dial on the extreme right operated on the same principle except that it was for finding various metals. Around the rim of the large dial in the middle, was listed all of the elements composing the Universe. Opposite the name of each element was a small indicator which swung away from it, pointing towards the center of the dial; outside, rested a series of small buttons, each button communicating with one of the elements listed within the dial. A button depressed would cause the tiny indicator to swing out of neutral and point to the element, providing that element was present in the meteor's composition. In this manner, a great many combinations not listed on the two smaller dials could be formed to ascertain their possible existence within the meteor.

Jan tested the meteor for the various stones. It was entirely devoid of gems. Had he discovered a supply within the wanderer of space, the astronaut would have drilled them out, providing they were near the surface, for the little space flyer was equipped with the facility for pointing out the definite location of the stones as well as recording their proximity. In case of their being too deep for the surface drills, he would chart the course of the meteor, and if the deposit of jewels or metals proved valuable enough, a wrecking crew would be sent out a few days later to overtake the meteor and extract its treasures.

He now turned his attention to the right hand dial, his hand upon the manipulator which sent the arrow around the face in short, periodic jerks. As he expected, the light above the dial flashed on when the arrow pointed to "iron." He found that the bulky mass also contained nickel, and a small amount of platinum whose scarcity did not warrant the trouble of its extraction. The central dial proved the fact that the meteor's main constituents consisted of iron and aside from the nickel and platinum deposits was entirely devoid of all other minerals.

Having finished with the death's head meteor, Jan decided to cast loose and explore the other two celestial wanderers which comprised the meteor train. The astronaut loosened the grapples, and threw in his controls which would send him away from the meteor. To his surprise, the space flyer refused to move. He turned on more power, and still his flyer did not budge, though he knew that his atomic energy machine was functioning perfectly, for his instrument board told him that. Evidently the force of his contact with the meteor had been so great that the little space car had become wedged in the side of the meteor, or else the twisted parts of the broken grapples and the other exterior apparatus which had been damaged in the collision, had become jammed into the meteor when the two came together. It was certain that he was stuck fast, and that he must search for some means which would effect his release from the predicament in which he found himself. He wished now that he had heeded the grave premonitions the sight of the gruesome meteor

had awakened in his mind, and avoided contact with it. But then, it was likely to happen to any space flyer engaged in the same hazardous pursuit as his.

He worked vainly at the controls of the damaged grapples and the jointed, exterior appliances, but the attempt was useless for they remained as immovable as if cast in a mold of steel. He was a prisoner, a prey to the death's head meteor which carried him farther away with it every moment, traveling at sixteen miles a second. They would soon pass by Mars, continue upon a route midway between the Earth and that planet, and eventually on out of the solar system towards the distant stars. What would be his fate? Would he starve, or his oxygen supply give out? Jan did not for a moment contemplate such thoughts. The Meteorological Bureau, seeing that he did not return within a reasonable time, would radio Mars, and the observatories of both worlds would train their giant telescopes upon the meteor train and discover his plight. No doubt, they were watching him now, the largest telescopes revealing his space ship as a small bright speck upon one of the three larger spots. It would be only a question of time, then, before help would be sent him, and his release obtained.

His thoughts were suddenly interrupted by a crashing jolt which once more threw him out of his seat at the instrument board just as it had done when his car had landed upon the meteor. What had happened? The meteor must have struck something, and it could be nothing more than one of its two companions, for there was nothing else in this vast void for it to strike. It might have been another flock of meteors, and had it been so, his instrument board would have announced their approach long before this.

Jan's logical reasoning, and his cool headedness in the face of the alarming situation, led him to the following solution. When his space car had landed upon the meteor, the force of the contact had been great enough to push the celestial wanderer off its course slightly, and all of the time it had slowly but surely converged its plane of direction with that of its nearer companion, so that they had come together at an acute angle, producing the shock he had just felt.

If this was so, thought the young astronaut, then the course of the meteor upon which his space ship was imprisoned must have veered again, following the second contact, slightly changing its course once more. He examined his instrument board and peered out of the brown glass window into the black, cosmic void. The sight which greeted his eyes appalled him with its terrifying significance fraught with sinister menace! Below him was the planet Mars, and the meteor on its changed course was rushing at it full speed! The red planet appeared as a half circle of light, new contours appearing upon its face from out of the darkened half.

The face of the young astronaut was drawn into tense lines, as he turned about towards his instrument board to find that the distance between himself and the planet Mars was a little better than a hundred thousand miles. He rapidly figured that unless he could release the space flyer from the giant meteor, he had but two hours in which to live! The death's head meteor, which was originally charted to pass by the planet Mars was now, through two slight collisions with the space flyer and the other meteor, plunging head on towards Mars! Jan visualized his end. The wanderer of space with its prisoner, traveling sixteen miles a second, would hurl itself into the Martian atmosphere which, though thinner than that of the Earth, would offer a great enough friction to create out of the meteor a blazing

THE DEATH'S HEAD METEOR

ball of fire, screaming through the air like a juggernaut to bury itself beneath the surface of Mars with a terrible detonation!

A Desperate Hope

WHILE the meteor was miles above Mars in the upper reaches of the rarefied atmosphere, the young astronaut would die of the intense heat from the friction of the air. Under the terrific heat, the space flyer would explode and burn up to a cinder within the space of a fleet second, to leave the death's head meteor mass continuing on its wild flight to destruction!

Jan Trenton quickly snapped himself out of the channel of gloomy, terrorizing thoughts which assailed his mind, holding it paralyzed for a brief moment. He had nearly two hours by Earth time before the meteor reached Mars, and he would die like a man, fighting for his life to the very last minute. He gazed out of the window on the side towards the meteor to note his position, and find out in what manner he was caught. A chill crept over him at the irony of fate! The little space car was jammed up against that dark rift of shadow which was likened to the mouth of the death's head! From a short distance, it would appear as if the grinning skull held the space flyer in its teeth, carrying it rapidly to oblivion!

If he could only have torn the imprisoned grapples free. But this was impossible in view of the fact that they were on the outside where he could not gain access to them. He released his atomic energy in all directions, trying to work his way loose, but the flyer was as immovable as a part of the meteor itself. He placed a terrific power behind him, capable of sending him racing through space at top speed had he been free. It was well that the staunch little craft had no weak spot or it would have torn itself to pieces. But the space car was strongly made and the effect of its great, atomic energy release was not to free the space ship or divert the course of the meteor, but to cause a surprising result. The meteor began to rotate on its axis, slowly turning in the direction opposite to that of the power release.

The planet Mars flashed past the window at short intervals, its semi-circle of light glowing a dull red. As Jan peered from the window during several complete rotations of the big meteor, he saw that the rest of the meteor train had vanished, no doubt pursuing their original, aimless course past Mars.

The young astronaut had one last plan, and he lost no time in proceeding to put it into operation. He would attempt to drill his way out with the exterior drills on the little craft towards the side which was held by the meteor. It was a question whether or not the drills could free him before the meteor crashed into Mars. He reached quickly for the controls which operated the drills to find that there were only three drills on that side of the flyer towards the meteor which had not been damaged. The others had either been broken off or else lay twisted amid the wreckage of the exterior apparatus which imbedded itself in the meteor. Jan set them going, directing their sharp ends into the rock around the point at which the little space craft clung to the meteor. Tiny showers of dust rattled against the sides of the flyer as the drills bit into the huge meteor rotating slowly, as it ate up the distance to the great world upon which it was destined to crash.

The young astronaut watched the three drills work, operating them from inside the flyer, while at frequent intervals he would steal glances at his chronometer, and then at the Martian planet which was gradually

filling his field of vision. A feeling of sickly despair tugged at his heart, and hope grew dim as he saw that he had less than three quarters of an hour left. He had drilled a series of holes in the meteor all the way around the imprisoned grapples, at a distance of several inches apart. With the steel fingers on the jointed rods outside his car, he had torn away what rock had been loosened, and still the flyer clung to the face of the whirling meteor rushing towards Mars at a frightful speed, diminishing the distance at nearly a thousand miles a minute.

Still he worked doggedly at his controls, and a cold sweat broke out upon him as he watched the minute hand crawl slowly around the chronometer. Glancing at his three drills, he saw that one of them needed changing, and proceeded to place it in a new position. His spirits were at low ebb, but as long as life existed in his body, the young astronaut would continue the attempt to free his imprisoned flyer, and extricate himself. Jan felt that in his perilous calling he had cheated death too long, and that this time the grim reaper held the winning cards. The hands on the chronometer had now stolen to a position which indicated that less than fifteen minutes were left him. The vibration of the drills could still be felt within the space flyer, and a steady swish of meteoric debris against the side of the craft made itself heard.

Jan gazed dully out of the window away from the meteor whose rotation gave him a round-trip view of the entire sky. He was now so close to Mars that he could clearly discern some of the mountain ranges and flat, red deserts as the planet swung past his eyes. He gazed longingly at the brilliant green star, his home, which turned upon its orbit far off in space. He had left it for the last time. The scintillating stars gleamed brilliantly in the blackness and from the incandescent mass of the sun leaped great columns of flame. Once more the meteor had completed its day of little more than a minute, and the certainty of doom grew more ominous.

As the last minute crept around on the chronometer, Jan Trenton prepared for his end. Setting the three drills working at their maximum speed, he turned on the entire power of the craft as it sailed down into the Martian atmosphere with the meteor on its terrific flight. A glare of light flitted quickly through the windows, and a weird whistling arose to a wailing scream. Just before he lost consciousness, the young astronaut was aware of a great wave of heat which swept over him like a blast from a furnace.

The meteor struck upon the darkened side of Mars at an hour closely preceding dawn. Martians who saw it, afterward described it as a great ball of fire which rushed out of the sky like a comet, setting the heavens aglow with its glare. While still high in the air, it exploded with a loud concussion which was heard for hundreds of miles, the masses of scattered fragments catapulting themselves into the quivering ground, throwing up a cascade of dirt and rocks, flattening trees, and leaving great craters. It appeared to burst into two large central nuclei with smaller pieces surrounding them. Those near its landing place reported a tremendous wave of suffocating heat which swept the vicinity when the meteor landed.

Deliverance

AS Jan came to himself, his first sensation was a dizzy feeling in his head, and the oppressive warmth within the space flyer. He gathered his scattered wits together. Hadn't the crash come yet? It

The Death's Head Meteor

couldn't be possible that the meteor had missed the great planet for which it had been headed so squarely. He looked about him in a confused manner, not quite brought to his entire senses. His brain was still hazy, and he felt greatly exhausted as his wandering eyes fell upon the dial board. It was registering top speed!

With great effort, he painfully drew himself towards the brown glass window and looked out—into the intense darkness of space in which were set myriads of scintillating stars. He looked on the other side for the death's head meteor, but it was gone. All that remained of it was a chunk about three feet thick and as long, around which the wreckage of the twisted grapples lay entwined. Above the meteoric fragment, the three drills still churned, one of them broken in half. Jan looked behind him, and out of the window he could discern a small red blot, Mars, far to the rear, and growing smaller.

For a moment he could not understand the miracle which had occurred. Then gradually it dawned upon him that he had been grasped from the jaws of death just in time. The presence of the meteor's chunk and the oppressive heat within the space car gave testimony of his deliverance before entering the atmosphere of Mars.

The space car containing the unconscious young astronaut had whirled off through the outer layer of Martian atmosphere and into the coldness of space

once more. This accounted for the suffocating heat inside the flyer where the intense friction from the thin, rarefied air had heated the space ship. He must have penetrated it at a terrible speed on his outward flight. He had been unconscious for a bare five minutes, and already he was nearly fifty thousand miles from Mars. He started the air rejuvenator to clear the hot, stuffy interior of the craft, after which he turned the flyer and headed back for Mars.

In the radio receiving station on the Earth, the big glass bulb set in the wall above the operator's head suddenly flashed, and an electric spark snapped and crackled as it closed the gap between two metal cylinders. The operator mechanically adjusted the dials and switches, and the cylinder containing the aluminum sheet began turning, filling the room with its droning noise. As the bulb grew dark once more, and the roller came to a stop, the aluminum sheet cleaved from off the roller and fell to the desk before the operator.

Before placing it upon the transmitter plate and pressing the button marked "Meteorological Bureau," the silver-capped operator reviewed the message curiously. It was the report of one of the astronauts employed by the government Bureau of Meteorology, Jan Trenton by name. It seemed that he was stopping over at Mars while his ship underwent certain repairs, and that he would report for further duty the next day.

Such is the life of an astronaut.

THE END.

Galaxy

SCIENCE FICTION

JANUARY 1954
25¢

NATURAL STATE
By Damon Knight



Kurt Vonnegut, Jr. often wrote gallows humor, as in this next story, and satire. The *New York Times* obituary in 2007 said he was “the counterculture's novelist”.

Born as a Hoosier from Indianapolis in 1922, he was a combat veteran in World War II, and was taken prisoner in the Battle of the Bulge.

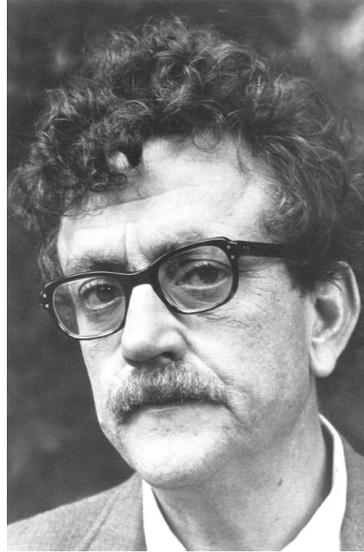
His wartime experiences greatly influenced his outlook on life and his writing. As a prisoner, he was held in an underground slaughterhouse during the bombing of Dresden. His German captors called the building *Schlachthof Fünf*, which is German for “Slaughterhouse Five”.

The following story reminds me of Isaac Asimov's *Pebble In the Sky* and China's present day “one child” law, although Vonnegut's America is a bit harsher than today's China. I think Asimov's vision is worse.

In Asimov's novel, no one was allowed to be older than sixty years of age because of population pressures, and I'm past “the sixty” as it's called in his book. In Vonnegut's story, everyone lives as long as they want, and the law is that when someone is born, someone has to die. If nobody volunteers, the infant is killed.

On April 11, 2007, Vonnegut died at age 94 in Manhattan, New York, several weeks after incurring brain damage in a fall.

His obituary the next day in the *New York Times* says “In Chicago, Mr. Vonnegut worked as a police reporter for the City News Bureau. He also studied for a master's degree in anthropology at the University of Chicago, writing a thesis on ‘The Fluctuations Between Good and Evil in Simple Tales.’ It was re-



jected unanimously by the faculty. (The university finally awarded him a degree almost a quarter of a century later, allowing him to use his novel *Cat's Cradle* as his thesis.)”

I mentioned anachronisms in the foreword, and there are several in this story, not the least of which is a telephone booth. I haven't seen one in decades.

Few writers seemed, oddly, to have noticed advances in farm equipment, other farming technologies, or advances in chemistry, biology, agronomy, and other sciences needed to improve yields. In this story, people resorted to eating seaweed by the year 2000. The reality of his future and our present is that today there is plenty of food for everyone, and the only reason people go hungry is politics.

2 B R O 2 B

Kurt Vonnegut, Jr.

Everything was perfectly swell.

There were no prisons, no slums, no insane asylums, no cripples, no poverty, no wars.

All diseases were conquered. So was old age.

Death, barring accidents, was an adventure for volunteers.

The population of the United States was stabilized at forty-million souls.

One bright morning in the Chicago Lying-in Hospital, a man named Edward K. Wehling, Jr., waited for his wife to give birth. He was the only man waiting. Not many people were born a day any more.

Wehling was fifty-six, a mere stripling in a population whose average age was one hundred and twenty-nine.

X-rays had revealed that his wife was going to have triplets. The children would be his first.

Young Wehling was hunched in his chair, his head in his hand. He was so rumped, so still and colorless as to be virtually invisible. His camouflage was perfect, since the waiting room had a disorderly and demoralized air, too. Chairs and ashtrays had been moved away from the walls. The floor was paved with spattered dropcloths.

The room was being redecorated. It was being redecorated as a memorial to a man who had volunteered to die.

A sardonic old man, about two hundred years old, sat on a stepladder, painting a mural he did not like. Back in the days when people aged visibly, his age would have been guessed at thirty-five or so. Aging had touched him that much before the cure for aging was found.

The mural he was working on depicted a very neat garden. Men and women in white, doctors and nurses, turned the soil, planted seedlings, sprayed bugs, spread fertilizer.

Men and women in purple uniforms pulled up weeds, cut down plants that were old and sickly, raked leaves, carried refuse to trash-burners.

Never, never, never—not even in medieval Holland nor old Japan—had a garden been more formal, been better tended. Every plant had all the loam, light, water, air and nourishment it could use.

A hospital orderly came down the corridor, singing under his breath a popular song:

If you don't like my kisses, honey,
Here's what I will do:
I'll go see a girl in purple,
Kiss this sad world toodle-oo.
If you don't want my lovin',
Why should I take up all this space?
I'll get off this old planet,
Let some sweet baby have my place.

The orderly looked in at the mural and the muralist.

"Looks so real," he said, "I can practically imagine I'm standing in the middle of it."

"What makes you think you're not in it?" said the painter. He gave a satiric smile. "It's called 'The Happy Garden of Life,' you know."

"That's good of Dr. Hitz," said the orderly.

He was referring to one of the male figures in white, whose head was a portrait of Dr. Benjamin Hitz, the hospital's Chief Obstetrician. Hitz was a blindingly handsome man.

"Lot of faces still to fill in," said the orderly. He meant that the faces of many of the figures in the mural were still blank. All blanks were to be filled with portraits of important people on either the hospital staff or from the Chicago Office of the Federal Bureau of Termination.

"Must be nice to be able to make pictures that look like something," said the orderly.

The painter's face curdled with scorn. "You think I'm proud of this daub?" he said. "You think this is my idea of what life really looks like?"

"What's your idea of what life looks like?" said the orderly.

The painter gestured at a foul dropcloth. "There's a good picture of it," he said. "Frame that, and you'll have a picture a damn sight more honest than this one."

"You're a gloomy old duck, aren't you?" said the orderly.

"Is that a crime?" said the painter.

The orderly shrugged. "If you don't like it here, Grandpa—" he said, and he finished the thought with the trick telephone number that people who didn't want to live any more were supposed to call. The zero in the telephone number he pronounced "naught."

The number was: "2 B R O 2 B."

It was the telephone number of an institution whose fanciful sobriquets included: "Automat," "Birdland," "Cannery," "Catbox," "De-louser," "Easy-go," "Good-by, Mother," "Happy Hooligan," "Kiss-me-quick," "Lucky Pierre," "Sheepdip," "Waring Blendor," "Weep-no-more" and "Why Worry?"

"To be or not to be" was the telephone number of the municipal gas chambers of the Federal Bureau of Termination.

The painter thumbed his nose at the orderly. "When I decide it's time to go," he said, "it won't be at the Sheepdip."

"A do-it-yourselfer, eh?" said the orderly. "Messy business, Grandpa. Why don't you have a little consideration for the people who have to clean up after you?"

The painter expressed with an obscenity his lack of concern for the tribulations of his survivors. "The world could do with a good deal more mess, if you ask me," he said.

The orderly laughed and moved on.

Wehling, the waiting father, mumbled something without raising his head. And then he fell silent again.

A coarse, formidable woman strode into the waiting room on spike heels. Her shoes, stockings, trench coat, bag and overseas cap were all purple, the purple the painter called “the color of grapes on Judgment Day.”

The medallion on her purple musette bag was the seal of the Service Division of the Federal Bureau of Termination, an eagle perched on a turnstile.

The woman had a lot of facial hair—an unmistakable mustache, in fact. A curious thing about gas-chamber hostesses was that, no matter how lovely and feminine they were when recruited, they all sprouted mustaches within five years or so.

“Is this where I’m supposed to come?” she said to the painter.

“A lot would depend on what your business was,” he said. “You aren’t about to have a baby, are you?”

“They told me I was supposed to pose for some picture,” she said. “My name’s Leora Duncan.” She waited.

“And you dunk people,” he said.

“What?” she said.

“Skip it,” he said.

“That sure is a beautiful picture,” she said. “Looks just like heaven or something.”

“Or something,” said the painter. He took a list of names from his smock pocket. “Duncan, Duncan, Duncan,” he said, scanning the list. “Yes—here you are. You’re entitled to be immortalized. See any faceless body here you’d like me to stick your head on? We’ve got a few choice ones left.”

She studied the mural bleakly. “Gee,” she said, “they’re all the same to me. I don’t know anything about art.”

“A body’s a body, eh?” he said, “All righty. As a master of fine art, I recommend this body here.” He indicated a faceless figure of a woman who was carrying dried stalks to a trash-burner.

“Well,” said Leora Duncan, “that’s more the disposal people, isn’t it? I mean, I’m in service. I don’t do any disposing.”

The painter clapped his hands in mock delight. "You say you don't know anything about art, and then you prove in the next breath that you know more about it than I do! Of course the sheave-carrier is wrong for a hostess! A snipper, a pruner—that's more your line." He pointed to a figure in purple who was sawing a dead branch from an apple tree. "How about her?" he said. "You like her at all?"

"Gosh—" she said, and she blushed and became humble—"that—that puts me right next to Dr. Hitz."

"That upsets you?" he said.

"Good gravy, no!" she said. "It's—it's just such an honor."

"Ah, You admire him, eh?" he said.

"Who doesn't admire him?" she said, worshipping the portrait of Hitz. It was the portrait of a tanned, white-haired, omnipotent Zeus, two hundred and forty years old. "Who doesn't admire him?" she said again. "He was responsible for setting up the very first gas chamber in Chicago."

"Nothing would please me more," said the painter, "than to put you next to him for all time. Sawing off a limb—that strikes you as appropriate?"

"That is kind of like what I do," she said. She was demure about what she did. What she did was make people comfortable while she killed them.

And, while Leora Duncan was posing for her portrait, into the waitingroom bounded Dr. Hitz himself. He was seven feet tall, and he boomed with importance, accomplishments, and the joy of living.

"Well, Miss Duncan! Miss Duncan!" he said, and he made a joke. "What are you doing here?" he said. "This isn't where the people leave. This is where they come in!"

"We're going to be in the same picture together," she said shyly.

"Good!" said Dr. Hitz heartily. "And, say, isn't that some picture?"

"I sure am honored to be in it with you," she said.

“Let me tell you,” he said, “I’m honored to be in it with you. Without women like you, this wonderful world we’ve got wouldn’t be possible.”

He saluted her and moved toward the door that led to the delivery rooms. “Guess what was just born,” he said.

“I can’t,” she said.

“Triplets!” he said.

“Triplets!” she said. She was exclaiming over the legal implications of triplets.

The law said that no newborn child could survive unless the parents of the child could find someone who would volunteer to die. Triplets, if they were all to live, called for three volunteers.

“Do the parents have three volunteers?” said Leora Duncan.

“Last I heard,” said Dr. Hitz, “they had one, and were trying to scrape another two up.”

“I don’t think they made it,” she said. “Nobody made three appointments with us. Nothing but singles going through today, unless somebody called in after I left. What’s the name?”

“Wehling,” said the waiting father, sitting up, red-eyed and frowzy. “Edward K. Wehling, Jr., is the name of the happy father-to-be.”

He raised his right hand, looked at a spot on the wall, gave a hoarsely wretched chuckle. “Present,” he said.

“Oh, Mr. Wehling,” said Dr. Hitz, “I didn’t see you.”

“The invisible man,” said Wehling.

“They just phoned me that your triplets have been born,” said Dr. Hitz. “They’re all fine, and so is the mother. I’m on my way in to see them now.”

“Hooray,” said Wehling emptily.

“You don’t sound very happy,” said Dr. Hitz.

“What man in my shoes wouldn’t be happy?” said Wehling. He gestured with his hands to symbolize care-free simplicity. “All I have to do is pick out which one of the triplets

is going to live, then deliver my maternal grandfather to the Happy Hooligan, and come back here with a receipt.”

Dr. Hitz became rather severe with Wehling, towered over him. “You don’t believe in population control, Mr. Wehling?” he said.

“I think it’s perfectly keen,” said Wehling tautly.

“Would you like to go back to the good old days, when the population of the Earth was twenty billion—about to become forty billion, then eighty billion, then one hundred and sixty billion? Do you know what a drupelet is, Mr. Wehling?” said Hitz.

“Nope,” said Wehling sulkily.

“A drupelet, Mr. Wehling, is one of the little knobs, one of the little pulpy grains of a blackberry,” said Dr. Hitz. “Without population control, human beings would now be packed on this surface of this old planet like drupelets on a blackberry! Think of it!”

Wehling continued to stare at the same spot on the wall.

“In the year 2000,” said Dr. Hitz, “before scientists stepped in and laid down the law, there wasn’t even enough drinking water to go around, and nothing to eat but sea-weed—and still people insisted on their right to reproduce like jackrabbits. And their right, if possible, to live forever.”

“I want those kids,” said Wehling quietly. “I want all three of them.”

“Of course you do,” said Dr. Hitz. “That’s only human.”

“I don’t want my grandfather to die, either,” said Wehling.

“Nobody’s really happy about taking a close relative to the Catbox,” said Dr. Hitz gently, sympathetically.

“I wish people wouldn’t call it that,” said Leora Duncan.

“What?” said Dr. Hitz.

“I wish people wouldn’t call it ‘the Catbox,’ and things like that,” she said. “It gives people the wrong impression.”

“You’re absolutely right,” said Dr. Hitz. “Forgive me.”

He corrected himself, gave the municipal gas chambers their official title, a title no one ever used in conversation. "I should have said," "Ethical Suicide Studios," he said.

"That sounds so much better," said Leora Duncan.

"This child of yours—whichever one you decide to keep, Mr. Wehling," said Dr. Hitz. "He or she is going to live on a happy, roomy, clean, rich planet, thanks to population control. In a garden like that mural there." He shook his head. "Two centuries ago, when I was a young man, it was a hell that nobody thought could last another twenty years. Now centuries of peace and plenty stretch before us as far as the imagination cares to travel."

He smiled luminously.

The smile faded as he saw that Wehling had just drawn a revolver.

Wehling shot Dr. Hitz dead. "There's room for one—a great big one," he said.

And then he shot Leora Duncan. "It's only death," he said to her as she fell. "There! Room for two."

And then he shot himself, making room for all three of his children.

Nobody came running. Nobody, seemingly, heard the shots.

The painter sat on the top of his stepladder, looking down reflectively on the sorry scene.

The painter pondered the mournful puzzle of life demanding to be born and, once born, demanding to be fruitful ... to multiply and to live as long as possible—to do all that on a very small planet that would have to last forever.

All the answers that the painter could think of were grim. Even grimmer, surely, than a Catbox, a Happy Hooligan, an Easy Go. He thought of war. He thought of plague. He thought of starvation.

He knew that he would never paint again. He let his paintbrush fall to the drop-cloths below. And then he decided he had had about enough of life in the Happy Garden of Life,

too, and he came slowly down from the ladder.

He took Wehling's pistol, really intending to shoot himself.

But he didn't have the nerve.

And then he saw the telephone booth in the corner of the room. He went to it, dialed the well-remembered number: "2 B R O 2 B."

"Federal Bureau of Termination," said the very warm voice of a hostess.

"How soon could I get an appointment?" he asked, speaking very carefully.

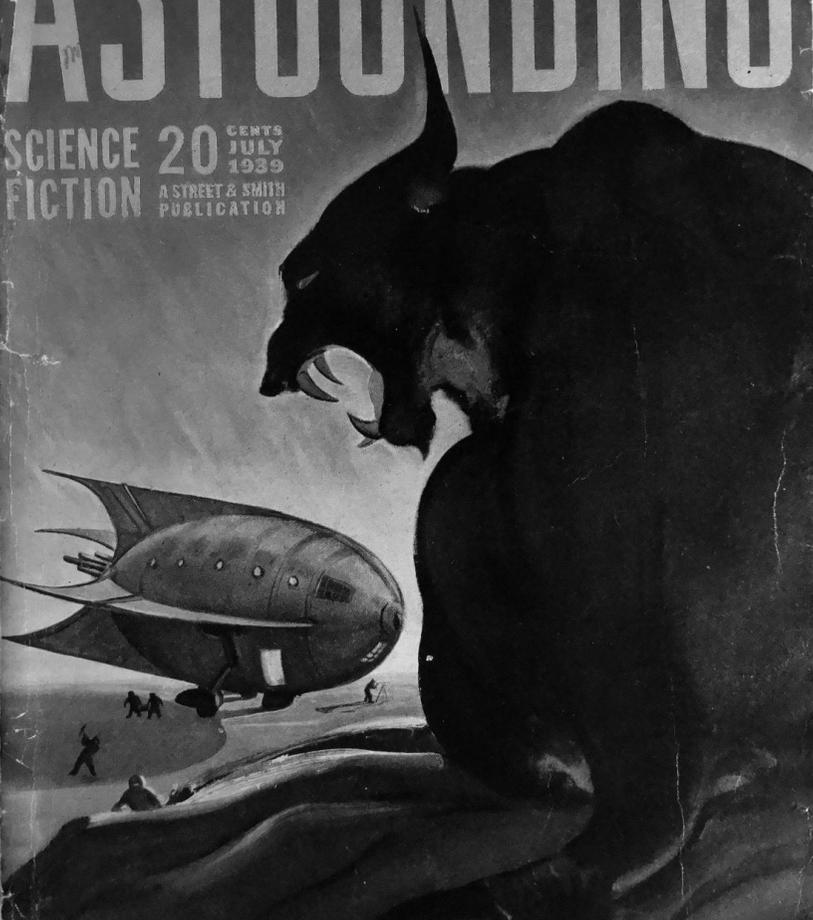
"We could probably fit you in late this afternoon, sir," she said. "It might even be earlier, if we get a cancellation."

"All right," said the painter, "fit me in, if you please." And he gave her his name, spelling it out.

"Thank you, sir," said the hostess. "Your city thanks you; your country thanks you; your planet thanks you. But the deepest thanks of all is from future generations."

ASTOUNDING

SCIENCE FICTION 20 CENTS
JULY 1939
A STREET & SMITH PUBLICATION



BLACK DESTROYER by A. E. Van Vogt

Harlan Ellison said that “A.E. van Vogt was the first writer to shine light on the restricted ways in which I had been taught to view the universe and the human condition.”

Alfred Elton van Vogt was born on April 26, 1912 in Edenburg, Canada, speaking only German until he was four years old. He moved to the United States in the later half of 1944 after writing four novels and over fifty short stories in Canada, and



continued writing. The *Encyclopedia of Science Fiction* says he was “the first Canadian sf writer of real importance.”

He coined the term “fix-up”, which is a novel that is constructed out of older short stories, fused together. It is suggested that William Faulkner's *Go Down, Moses* is a fix-up. He told Robert Weinberg in an interview, “Let's put it very simply: a novel would sell whereas the individual stories seldom did.”

He began his career as an author when he wrote for the romance pulp fiction magazines of the time, but switched to science fiction because he likes SF, and didn't really care much for the “true confessions” he was writing. His first science fiction story, *Vault of the Beast*, was rejected when he submitted it to *Astounding Science Fiction*. Encouraged by the rejection letter, he submitted *Black Destroyer* to the same magazine, and it became the July 1932 cover story.

That issue of *Astounding* is said by some to have ushered in “the golden age of science fiction,” and its cover story is next.

He died in Hollywood on January 26, 2000 at the ripe old age of eighty seven.

Black Destroyer

A. E. van Vogt

On and on Coeurl prowled! The black, moonless, almost starless night yielded reluctantly before a grim reddish dawn that crept up from his left. A vague, dull light it was, that gave no sense of approaching warmth, no comfort, nothing but a cold, diffuse lightness, slowly revealing a nightmare landscape.

Black, jagged rock and black, unliving plain took form around him, as a pale-red sun peered at last above the grotesque horizon. It was then Coeurl recognized suddenly that he was on familiar ground.

He stopped short. Tenseness flamed along his nerves. His muscles pressed with sudden, unrelenting strength against his bones. His great forelegs—twice as long as his hindlegs—twitched with a shuddering movement that arched every razor-sharp claw. The thick tentacles that sprouted from his shoulders ceased their weaving undulation, and grew taut with anxious alertness.

Utterly appalled, he twisted his great cat head from side to side, while the little hairlike tendrils that formed each ear vibrated frantically, testing every vagrant breeze, every throb in the ether.

But there was no response, no swift tingling along his intricate nervous system, not the faintest suggestion anywhere of the presence of the all-necessary id. Hopelessly, Coeurl crouched, an enormous catlike figure silhouetted against the dim reddish skyline, like a distorted etching of a black tiger resting on a black rock in a shadow world.

He had known this day would come. Through all the centuries of restless search, this day had loomed ever nearer, blacker, more frightening—this inevitable hour when he must return to the point where he began his systematic hunt in a world almost depleted of id-creatures.

The truth struck in waves like an endless, rhythmic ache at the seat of his ego. When he had started, there had been a few id-creatures in every hundred square miles, to be mercilessly rooted out. Only too well Coeurl knew in this ultimate hour that he had missed none. There were no id-creatures left to eat. In all the hundreds of thousands of square miles that he had made his own by right of ruthless conquest—until no neighboring coeurl dared to question his sovereignty—there was no id to feed the otherwise immortal engine that was his body.

Square foot by square foot he had gone over it. And now—he recognized the knoll of rock just ahead, and the black rock bridge that formed a queer, curling tunnel to his right. It was in that tunnel he had lain for days, waiting for the simple-minded, snakelike id-creature to come forth from its hole in the rock to bask in the sun—his first kill after he had realized the absolute necessity of organized extermination.

He licked his lips in brief gloating memory of the moment his slaving jaws tore the victim into precious toothsome bits. But the dark fear of an idless universe swept the sweet remembrance from his consciousness, leaving only certainty of death.

He snarled audibly, a defiant, devilish sound that quavered on the air, echoed and re-echoed among the rocks, and shuddered back along his nerves—instinctive and hellish expression of his will to live.

And then—abruptly—it came.

He saw it emerge out of the distance on a long downward slant, a tiny glowing spot that grew enormously into a metal ball. The great shining globe hissed by above Coeurl, slowing visibly in quick deceleration. It sped over a black line of hills to the right, hovered almost motionless for a second, then sank down out of sight.

Coeurl exploded from his startled immobility. With tiger speed, he flowed down among the rocks. His round, black eyes burned with the horrible desire that was an agony within

him. His ear tendrils vibrated a message of id in such tremendous quantities that his body felt sick with the pangs of his abnormal hunger.

The little red sun was a crimson ball in the purple-black heavens when he crept up from behind a mass of rock and gazed from its shadows at the crumbling, gigantic ruins of the city that sprawled below him. The silvery globe, in spite of its great size, looked strangely inconspicuous against that vast, fairylike reach of ruins. Yet about it was a leashed aliveness, a dynamic quiescence that, after a moment, made it stand out, dominating the foreground. A massive, rock-crushing thing of metal, it rested on a cradle made by its own weight in the harsh, resisting plain which began abruptly at the outskirts of the dead metropolis.

Coeurl gazed at the strange, two-legged creatures who stood in little groups near the brilliantly lighted opening that yawned at the base of the ship. His throat thickened with the immediacy of his need; and his brain grew dark with the first wild impulse to burst forth in furious charge and smash these flimsy, helpless-looking creatures whose bodies emitted the id-vibrations.

Mists of memory stopped that mad rush when it was still only electricity surging through his muscles. Memory that brought fear in an acid stream of weakness, pouring along his nerves, poisoning the reservoirs of his strength. He had time to see that the creatures wore things over their real bodies, shimmering transparent material that glittered in strange, burning flashes in the rays of the sun.

Other memories came suddenly. Of dim days when the city that spread below was the living, breathing heart of an age of glory that dissolved in a single century before flaming guns whose wielders knew only that for the survivors there would be an ever—narrowing supply of id.

It was the remembrance of those guns that held him there, cringing in a wave of terror that blurred his reason. He saw himself smashed by balls of metal and burned by searing

flame.

Came cunning—understanding of the presence of these creatures. This, Coeurl reasoned for the first time, was a scientific expedition from another star. In the olden days, the coeurls had thought of space travel, but disaster came too swiftly for it ever to be more than a thought.

Scientists meant investigation, not destruction. Scientists in their way were fools. Bold with his knowledge, he emerged into the open. He saw the creatures become aware of him. They turned and stared. One, the smallest of the group, detached a shining metal rod from a sheath, and held it casually in one hand. Coeurl loped on, shaken to his core by the action; but it was too late to turn back.

Commander Hal Morton heard little Gregory Kent, the chemist, laugh with the embarrassed half gurgle with which he invariably announced inner uncertainty. He saw Kent fingering the spindly metalite weapon.

Kent said: "I'll take no chances with anything as big as that."

Commander Morton allowed his own deep chuckle to echo along the communicators. "That," he grunted finally, "is one of the reasons why you're on this expedition, Kent—because you never leave anything to chance."

His chuckle trailed off into silence. Instinctively, as he watched the monster approach them across that black rock plain, he moved forward until he stood a little in advance of the others, his huge form bulking the transparent metalite suit. The comments of the men pattered through the radio communicator into his ears:

"I'd hate to meet that baby on a dark night in an alley."

"Don't be silly. This is obviously an intelligent creature. Probably a member of the ruling race."

"It looks like nothing else than a big cat, if you forget those tentacles sticking out from its shoulders, and make allowances for those monster forelegs."

"Its physical development," said a voice, which Morton

recognized as that of Siedel, the psychologist, “presupposes an animal-like adaptation to surroundings, not an intellectual one. On the other hand, its coming to us like this is not the act of an animal but of a creature possessing a mental awareness of our possible identity. You will notice that its movements are stiff, denoting caution, which suggests fear and consciousness of our weapons. I’d like to get a good look at the end of its tentacles. If they taper into handlike appendages that can really grip objects, then the conclusion would be inescapable that it is a descendant of the inhabitants of this city. It would be a great help if we could establish communication with it, even though appearances indicate that it has degenerated into a historyless primitive.”

Coeurl stopped when he was still ten feet from the foremost creature. The sense of id was so overwhelming that his brain drifted to the ultimate verge of chaos. He felt as if his limbs were bathed in molten liquid; his very vision was not quite clear, as the sheer sensuality of his desire thundered through his being.

The men—all except the little one with the shining metal rod in his fingers—came closer. Coeurl saw that they were frankly and curiously examining him. Their lips were moving, and their voices beat in a monotonous, meaningless rhythm on his ear tendrils. At the same time he had the sense of waves of a much higher frequency—his own communication level—only it was a machinelike clicking that jarred his brain. With a distinct effort to appear friendly, he broadcast his name from his ear tendrils, at the same time pointing at himself with one curving tentacle.

Gourlay, chief of communications, drawled: “I got a sort of static in my radio when he wiggled those hairs, Morton. Do you think—”

“Looks very much like it,” the leader answered the unfinished question. “That means a job for you, Gourlay. If it speaks by means of radio waves, it might not be altogether impossible that you can create some sort of television picture of

its vibrations, or teach him the Morse code.”

“Ah,” said Siedel. “I was right. The tentacles each develop into seven strong fingers. Provided the nervous system is complicated enough, those fingers could, with training, operate any machine.”

Morton said: “I think we’d better go in and have some lunch. Afterward, we’ve got to get busy. The material men can set up their machines and start gathering data on the planet’s metal possibilities, and so on. The others can do a little careful exploring. I’d like some notes on architecture and on the scientific development of this race, and particularly what happened to wreck the civilization. On earth civilization after civilization crumbled, but always a new one sprang up in its dust. Why didn’t that happen here? Any questions?”

“Yes. What about pussy? Look, he wants to come in with us.”

Commander Morton frowned, an action that emphasized the deep-space pallor of his face. “I wish there was some way we could take it in with us, without forcibly capturing it. Kent, what do you think?”

“I think we should first decide whether it’s an it or a him, and call it one or the other. I’m in favor of him. As for taking him in with us—” The little chemist shook his head decisively. “Impossible. This atmosphere is twenty-eight per cent chlorine. Our oxygen would be pure dynamite to his lungs.”

The commander chuckled. “He doesn’t believe that, apparently.” He watched the catlike monster follow the first two men through the great door. The men kept an anxious distance from him, then glanced at Morton questioningly. Morton waved his hand. “O.K. Open the second lock and let him get a whiff of the oxygen. That’ll cure him.”

A moment later, he cursed his amazement. “By Heaven, he doesn’t even notice the difference! That means he hasn’t any lungs, or else the chlorine is not what his lungs use. Let him in! You bet he can go in! Smith, here’s a treasure house for a biologist—harmless enough if we’re careful. We can always

handle him. But what a metabolism!"

Smith, a tall, thin, bony chap with a long, mournful face, said in an oddly forceful voice: "In all our travel, we've found only two higher forms of life. Those dependent on chlorine, and those who need oxygen—the two elements that support combustion. I'm prepared to stake my reputation that no complicated organism could ever adapt itself to both gases in a natural way. At first thought I should say here is an extremely advanced form of life. This race long ago discovered truths of biology that we are just beginning to suspect. Morton, we mustn't let this creature get away if we can help it."

"If his anxiety to get inside is any criterion," Commander Morton laughed, "then our difficulty will be to get rid of him."

He moved into the lock with Coeurl and the two men. The automatic machinery hummed; and in a few minutes they were standing at the bottom of a series of elevators that led up to the living quarters.

"Does that go up?" One of the men flicked a thumb in the direction of the monster.

"Better send him up alone, if he'll go in."

Coeurl offered no objection, until he heard the door slam behind him; and the closed cage shot upward. He whirled with a savage snarl, his reason swirling into chaos. With one leap, he pounced at the door. The metal bent under his plunge, and the desperate pain maddened him. Now, he was all trapped animal. He smashed at the metal with his paws, bending it like so much tin. He tore great bars loose with his thick tentacles. The machinery screeched; there were horrible jerks as the limitless power pulled the cage along in spite of projecting pieces of metal that scraped the outside walls. And then the cage stopped, and he snatched off the rest of the door and hurtled into the corridor.

He waited there until Morton and the men came up with drawn weapons. "We're fools," Morton said. "We should have shown him how it works. He thought we'd double-crossed

him.”

He motioned to the monster, and saw the savage glow fade from the coal-black eyes as he opened and closed the door with elaborate gestures to show the operation.

Coeurl ended the lesson by trotting into the large room to his right. He lay down on the rugged floor, and fought down the electric tautness of his nerves and muscles. A very fury of rage against himself for his fright consumed him. It seemed to his burning brain that he had lost the advantage of appearing a mild and harmless creature. His strength must have startled and dismayed them.

It meant greater danger in the task which he now knew he must accomplish: To kill everything in the ship, and take the machine back to their world in search of unlimited id.

With unwinking eyes, Coeurl lay and watched the two men clearing away the loose rubble from the metal doorway of the huge old building. His whole body ached with the hunger of his cells for id. The craving tore through his palpitant muscles, and throbbed like a living thing in his brain. His every nerve quivered to be off after the men who had wandered into the city. One of them, he knew, had gone—alone.

The dragging minutes fled; and still he restrained himself, still he lay there watching, aware that the men knew he watched. They floated a metal machine from the ship to the rock mass that blocked the great half-open door, under the direction of a third man. No flicker of their fingers escaped his fierce stare, and slowly, as the simplicity of the machinery became apparent to him, contempt grew upon him.

He knew what to expect finally, when the flame flared in incandescent violence and ate ravenously at the hard rock beneath. But in spite of his preknowledge, he deliberately jumped and snarled as if in fear, as that white heat burst forth. His ear tendrils caught the laughter of the men, their curious pleasure at his simulated dismay.

The door was released, and Morton came over and went inside with the third man. The latter shook his head.

“It’s a shambles. You can catch the drift of the stuff. Obviously, they used atomic energy, but . . . but it’s in wheel form. That’s a peculiar development. In our science, atomic energy brought in the nonwheel machine. It’s possible that here they’ve progressed *further* to a new type of wheel mechanics. I hope their libraries are better preserved than this, or we’ll never know. What could have happened to a civilization to make it vanish like this?”

A third voice broke through the communicators: “This is Siedel. I heard your question, Pennons. Psychologically and sociologically speaking, the only reason why a territory becomes uninhabited is lack of food.”

“But they’re so advanced scientifically, why didn’t they develop space flying and go elsewhere for their food?”

“Ask Gunlie Lester,” interjected Morton. “I heard him expounding some theory even before we landed.”

The astronomer answered the first call. “I’ve still got to verify all my facts, but this desolate world is the only planet revolving around that miserable red sun. There’s nothing else. No moon, not even a planetoid. And the nearest star system is *nine hundred light-years* away.

“So tremendous would have been the problem of the ruling race of this world, that in one jump they would not only have had to solve interplanetary but interstellar space traveling. When you consider how slow our own development was—first the moon, then Venus—each success leading to the next, and after centuries to the nearest stars; and last of all to the anti-accelerators that permitted galactic travel—considering all this, I maintain it would be impossible for any race to create such machines without practical experience. And, with the nearest star so far away, they had no incentive for the space adventuring that makes for experience.”

Cocurl was trotting briskly over to another group. But now, in the driving appetite that consumed him, and in the frenzy of his high scorn, he paid no attention to what they were doing. Memories of past knowledge, jarred into activity

by what he had seen, flowed into his consciousness in an ever-developing and more vivid stream.

From group to group he sped, a nervous dynamo—jumpy, sick with his awful hunger. A little car rolled up, stopping in front of him, and a formidable camera whirred as it took a picture of him. Over on a mound of rock, a gigantic telescope was rearing up toward the sky. Nearby, a disintegrating machine drilled its searing fire into an ever-deepening hole, down and down, straight down.

Coeurl's mind became a blur of things he watched with half attention. And ever more imminent grew the moment when he knew he could no longer carry on the torture of acting. His brain strained with an irresistible impatience; his body burned with the fury of his eagerness to be off after the man who had gone alone into the city.

He could stand it no longer. A green foam misted his mouth, maddening him. He saw that, for the bare moment, nobody was looking.

Like a shot from a gun, he was off. He floated along in great, gliding leaps, a shadow among the shadows of the rocks. In a minute, the harsh terrain hid the spaceship and the two-legged beings.

Coeurl forgot the ship, forgot everything but his purpose, as if his brain had been wiped clear by a magic, memory-erasing brush. He circled widely, then raced into the city, along deserted streets, taking short cuts with the ease of familiarity, through gaping holes in time-weakened walls, through long corridors of moldering buildings. He slowed to a crouching lope as his ear tendrils caught the id vibrations.

Suddenly, he stopped and peered from a scatter of fallen rock. The man was standing at what must once have been a window, sending the glaring rays of his flashlight into the gloomy interior. The flashlight clicked off. The man, a heavy-set, powerful fellow, walked off with quick, alert steps. Coeurl didn't like that alertness. It presaged trouble; it meant lightning reaction to danger.

Coeurl waited till the human being vanished around a corner, then he padded into the open. He was running now, tremendously faster than a man could walk, because his plan was clear in his brain. Like a wraith, he slipped down the next street, past a long block of buildings. He turned the first corner at top speed; and then, with dragging belly, crept into the half-darkness between the building and a huge chunk of debris. The street ahead was barred by a solid line of loose rubble that made it like a valley, ending in a narrow, bottlelike neck. The neck had its outlet just below Coeurl.

His ear tendrils caught the low-frequency waves of whistling. The sound throbbed through his being; and suddenly terror caught with icy fingers at his brain. The man would have a gun. Suppose he leveled one burst of atomic energy—*one burst*—before his own muscles could whip out in murder fury.

A little shower of rocks streamed past. And then the man was beneath him. Coeurl reached out and struck a single crushing blow at the shimmering transparent headpiece of the spacesuit. There was a tearing sound of metal and a gushing of blood. The man doubled up as if part of him had been telescoped. For a moment, his bones and legs and muscles combined miraculously to keep him standing. Then he crumpled with a metallic clank of his space armor.

Fear completely evaporated, Coeurl leaped out of hiding. With ravenous speed, he smashed the metal and the body within it to bits. Great chunks of metal, torn piecemeal from the suit, sprayed the ground. Bones cracked. Flesh crunched.

It was simple to tune in on the vibrations of the id, and to create the violent chemical disorganization that freed it from the crushed bone. The id was, Coeurl discovered, mostly in the bone.

He felt revived, almost reborn. Here was more food than he had had in the whole past year.

Three minutes, and it was over, and Coeurl was off like a thing fleeing dire danger. Cautiously, he approached the glis-

tening globe from the opposite side to that by which he had left. The men were all busy at their tasks. Gliding noiselessly, Coeurl slipped unnoticed up to a group of men.

Morton stared down at the horror of tattered flesh, metal and blood on the rock at his feet, and felt a tightening in his throat that prevented speech. He heard Kent say:

“He *would* go alone, damn him!” The little chemist’s voice held a sob imprisoned; and Morton remembered that Kent and Jarvey had chummed together for years in the way only two men can.

“The worst part of it is,” shuddered one of the men, “it looks like a senseless murder. His body is spread out like little lumps of flattened jelly, but it seems to be all there. I’d almost wager that if we weighed everything here, there’d still be one hundred and seventy-five pounds by earth gravity. That’d be about one hundred and seventy pounds here.”

Smith broke in, his mournful face lined with gloom: “The killer attacked Jarvey, and then discovered his flesh was alien—uneatable. Just like our big cat. Wouldn’t eat anything we set before him—” His words died out in sudden, queer silence. Then he said slowly: “Say, what about that creature? He’s big enough and strong enough to have done this with his own little paws.”

Morton frowned. “It’s a thought. After all, he’s the only living thing we’ve seen. We can’t just execute him on suspicion, of course—”

“Besides,” said one of the men, “he was never out of my sight.”

Before Morton could speak, Siedel, the psychologist, snapped, “Positive about that?”

The man hesitated. “Maybe he was for a few minutes. He was wandering around so much, looking at everything.”

“Exactly,” said Siedel with satisfaction. He turned to Morton. “You see, commander, I, too, had the impression that he was always around; and yet, thinking back over it, I find gaps. There were moments—probably long minutes—when he

was completely out of sight.”

Morton’s face was dark with thought, as Kent broke in fiercely: “I say, take no chances. Kill the brute on suspicion before he does any more damage.”

Morton said slowly: “Korita, you’ve been wandering around with Cranessy and Van Horne. Do you think pussy is a descendant of the ruling class of this planet?”

The tall Japanese archeologist stared at the sky as if collecting his mind. “Commander Morton,” he said finally, respectfully, “there is a mystery here. Take a look, all of you, at that majestic skyline. Notice the almost Gothic outline of the architecture. In spite of the megalopolis which they created, these people were close to the soil. The buildings are not simply ornamented. They are ornamental in themselves. Here is the equivalent of the Doric column, the Egyptian pyramid, the Gothic cathedral, growing out of the ground, earnest, big with destiny. If this lonely, desolate world can be regarded as a mother earth, then the land had a warm, a spiritual place in the hearts of the race.

“The effect is emphasized by the winding streets. Their machines prove they were mathematicians, but they were artists first; and so they did not create the geometrically designed cities of the ultra-sophisticated world metropolis. There is a genuine artistic abandon, a deep joyous emotion written in the curving and unmathematical arrangements of houses, buildings and avenues; a sense of intensity, of divine belief in an inner certainty. This is not a decadent, hoary-with-age civilization, but a young and vigorous culture, confident, strong with purpose.

“There it ended. Abruptly, as if at this point culture had its Battle of Tours, and began to collapse like the ancient Mohammedan civilization. Or as if in one leap it spanned the centuries and entered the period of contending states. In the Chinese civilization that period occupied 480-230 B.C., at the end of which the State of Tsin saw the beginning of the Chinese Empire. This phase Egypt experienced between 1780-1580 B.C.,

of which the last century was the -'Hyksos'—unmentionable—time. The classical experienced it from Chæronea—338—and, at the pitch of horror, from the -Gracchi—133—to Actium—31 B.C. The West European Americans were devastated by it in the nineteenth and twentieth centuries, and modern historians agree that, nominally, we entered the same phase fifty years ago; though, of course, we have solved the problem.

“You may ask, commander, what has all this to do with your question? My answer is: there is no record of a culture entering abruptly into the period of contending states. It is always a slow development; and the first step is a merciless questioning of all that was once held sacred. Inner certainties cease to exist, are dissolved before the ruthless probings of scientific and analytic minds. The skeptic becomes the highest type of being.

“I say that this culture ended abruptly in its most flourishing age. The sociological effects of such a catastrophe would be a sudden vanishing of morals, a reversion to almost bestial criminality, unleavened by any sense of ideal, a callous indifference to death. If this . . . this pussy is a descendant of such a race, then he will be a cunning creature, a thief in the night, a cold-blooded murderer, who would cut his own brother's throat for gain.”

“That's enough!” It was Kent's clipped voice. “Commander, I'm willing to act the role of executioner.”

Smith interrupted sharply: “Listen, Morton, you're not going to kill that cat yet, even if he is guilty. He's a biological treasure house.”

Kent and Smith were glaring angrily at each other. Morton frowned at them thoughtfully, then said: “Korita, I'm inclined to accept your theory as a working basis. But one question: Pussy comes from a period earlier than our own? That is, we are entering the highly civilized era of our culture, while he became suddenly historyless in the most vigorous period of his. *But* it is possible that his culture is a later one on this planet than ours is in the galactic-wide system we have civilized?”

“Exactly. His may be the middle of the tenth civilization of his world; while ours is the end of the eighth sprung from earth, each of the ten, of course, having been builded on the ruins of the one before it.”

“In that case, pussy would not know anything about the skepticism that made it possible for us to find him out so positively as a criminal and murderer?”

“No; it would be literally magic to him.”

Morton was smiling grimly. “Then I think you’ll get your wish, Smith. We’ll let pussy live; and if there are any fatalities, now that we know him, it will be due to rank carelessness. There’s just the chance, of course, that we’re wrong. Like Siedel, I also have the impression that he was always around. But now—we can’t leave poor Jarvey here like this. We’ll put him in a coffin and bury him.”

“No, we won’t!” Kent barked. He flushed. “I beg your pardon, commander. I didn’t mean it that way. I maintain pussy wanted something from that body. It looks to be all there, but something must be missing. I’m going to find out what, and pin this murder on him so that you’ll have to believe it beyond the shadow of a doubt.”

It was late night when Morton looked up from a book and saw Kent emerge through the door that led from the laboratories below.

Kent carried a large, flat bowl in his hands; his tired eyes flashed across at Morton, and he said in a weary, yet harsh, voice: “Now watch!”

He started toward Coeurl, who lay sprawled on the great rug, pretending to be asleep.

Morton stopped him. “Wait a minute, Kent. Any other time, I wouldn’t question your actions, but you look ill; you’re overwrought. What have you got there?”

Kent turned, and Morton saw that his first impression had been but a flashing glimpse of the truth. There were dark pouches under the little chemist’s gray eyes—eyes that gazed feverishly from sunken cheeks in an ascetic face.

"I've found the missing element," Kent said. "It's phosphorus. There wasn't so much as a square millimeter of phosphorus left in Jarvey's bones. Every bit of it had been drained out—by what super-chemistry I don't know. There are ways of getting phosphorus out of the human body. For instance, a quick way was what happened to the workman who helped build this ship. Remember, he fell into fifteen tons of molten metalite—at least, so his relatives claimed—but the company wouldn't pay compensation until the metalite, on analysis, was found to contain a high percentage of phosphorus—"

"What about the bowl of food?" somebody interrupted. Men were putting away magazines and books, looking up with interest.

"It's got organic phosphorus in it. He'll get the scent, or whatever it is that he uses instead of scent—"

"I think he gets the vibrations of things," Gourlay interjected lazily. "Sometimes, when he wiggles those tendrils, I get a distinct static on the radio. And then, again, there's no reaction, as if he's moved higher or lower on the wave scale. He seems to control the vibrations at will."

Kent waited with obvious impatience until Gourlay's last word, then abruptly went on: "All right, then, when he gets the vibration of the phosphorus and reacts to it like an animal, then—well, we can decide what we've proved by his reaction. May I go ahead, Morton?"

"There are three things wrong with your plan," Morton said. "In the first place, you seem to assume that he is only animal; you seem to have forgotten he may not be hungry after Jarvey; you seem to think that he will not be suspicious. But set the bowl down. His reaction may tell us something."

Coerl stared with unblinking black eyes as the man set the bowl before him. His ear tendrils instantly caught the vibrations from the contents of the bowl—and he gave it not even a second glance.

He recognized this two-legged being as the one who had held the weapon that morning. Danger! With a snarl, he float-

ed to his feet. He caught the bowl with the fingerlike appendages at the end of one looping tentacle, and emptied its contents into the face of Kent, who shrank back with a yell.

Explosively, Coeurl flung the bowl aside and snapped a hawser-thick tentacle around the cursing man's waist. He didn't bother with the gun that hung from Kent's belt. It was only a vibration gun, he sensed—atomic powered, but not an atomic disintegrator. He tossed the kicking Kent onto the nearest couch—and realized with a hiss of dismay that he should have disarmed the man.

Not that the gun was dangerous—but, as the man furiously wiped the gruel from his face with one hand, he reached with the other for his weapon. Coeurl crouched back as the gun was raised slowly and a white beam of flame was discharged at his massive head.

His ear tendrils hummed as they canceled the efforts of the vibration gun. His round, black eyes narrowed as he caught the movement of men reaching for their metalite guns. Morton's voice lashed across the silence.

“Stop!”

Kent clicked off his weapon; and Coeurl crouched down, quivering with fury at this man who had forced him to reveal something of his power.

“Kent,” said Morton coldly, “you're not the type to lose your head. You deliberately tried to kill pussy, knowing that the majority of us are in favor of keeping him alive. You know what our rule is: If anyone objects to my decisions, he must say so *at the time*. If the majority object, my decisions are overruled. In this case, no one but you objected, and, therefore, your action in taking the law into your own hands is most reprehensible, and automatically debars you from voting for a year.”

Kent stared grimly at the circle of faces. “Korita was right when he said ours was a highly civilized age. It's decadent.” Passion flamed harshly in his voice. “My God, isn't there a man here who can see the horror of the situation? Jarvey

dead only a few hours, and this creature, whom we all know to be guilty, lying there unchained, planning his next murder; and the victim is right here in this room. What kind of men are we—fools, cynics, ghouls—or is it that our civilization is so steeped in reason that we can contemplate a murderer sympathetically?”

He fixed brooding eyes on Coeurl. “You were right, Morton, that’s no animal. That’s a devil from the deepest hell of this forgotten planet, whirling its solitary way around a dying sun.”

“Don’t go melodramatic on us,” Morton said. “Your analysis is all wrong, so far as I’m concerned. We’re not ghouls or cynics; we’re simply scientists, and pussy here is going to be studied. Now that we suspect him, we doubt his ability to trap any of us. One against a hundred hasn’t a chance.” He glanced around. “Do I speak for all of us?”

“Not for me, commander!” It was Smith who spoke, and, as Morton stared in amazement, he continued: “In the excitement and momentary confusion, no one seems to have noticed that when Kent fired his vibration gun, the beam hit this creature squarely on his cat head—and didn’t hurt him.”

Morton’s amazed glance went from Smith to Coeurl, and back to Smith again. “Are you certain it hit him? As you say, it all happened so swiftly—when pussy wasn’t hurt I simply assumed that Kent had missed him.”

“He hit him in the face,” Smith said positively. “A vibration gun, of course, can’t even kill a man right away—but it can injure him. There’s no sign of injury on pussy, though, not even a singed hair.”

“Perhaps his skin is a good insulation against heat of any kind.”

“Perhaps. But in view of our uncertainty, I think we should lock him up in the cage.”

While Morton frowned darkly in thought, Kent spoke up. “Now you’re talking sense, Smith.”

Morton asked: “Then you would be satisfied, Kent, if we

put him in the cage?”

Kent considered, finally: “Yes. If four inches of micro-steel can’t hold him, we’d better give him the ship.”

Coeurl followed the men as they went out into the corridor. He trotted docilely along as Morton unmistakably motioned him through a door he had not hitherto seen. He found himself in a square, solid metal room. The door clanged metallically behind him; he felt the flow of power as the electric lock clicked home.

His lips parted in a grimace of hate, as he realized the trap, but he gave no other outward reaction. It occurred to him that he had progressed a long way from the sunk-into-primitiveness creature who, a few hours before, had gone incoherent with fear in an elevator cage. Now, a thousand memories of his powers were reawakened in his brain; ten thousand cunningings were, after ages of disuse, once again part of his very being.

He sat quite still for a moment on the short, heavy haunches into which his body tapered, his ear tendrils examining his surroundings. Finally, he lay down, his eyes glowing with contemptuous fire. The fools! The poor fools!

It was about an hour later when he heard the man—Smith—fumbling overhead. Vibrations poured upon him, and for just an instant he was startled. He leaped to his feet in pure terror—and then realized that the vibrations *were* vibrations, not atomic explosions. Somebody was taking pictures of the inside of his body.

He crouched down again, but his ear tendrils vibrated, and he thought contemptuously: the silly fool would be surprised when he tried to develop those pictures.

After a while the man went away, and for a long time there were noises of men doing things far away. That, too, died away slowly.

Coeurl lay waiting, as he felt the silence creep over the ship. In the long ago, before the dawn of immortality, the coeurls, too, had slept at night; and the memory of it had been

revived the day before when he saw some of the men dozing. At last, the vibration of two pairs of feet, pacing, pacing endlessly, was the only human-made frequency that throbbed on his ear tendrils.

Tensely, he listened to the two watchmen. The first one walked slowly past the cage door. Then about thirty feet behind him came the second. Coeurl sensed the alertness of these men; knew that he could never surprise either while they walked separately. It meant—he must be doubly careful!

Fifteen minutes, and they came again. The moment they were past, he switched his sense from their vibrations to a vastly higher range. The pulsating violence of the atomic engines stammered its soft story to his brain. The electric dynamos hummed their muffled song of pure power. He felt the whisper of that flow through the wires in the walls of his cage, and through the electric lock of his door. He forced his quivering body into straining immobility, his senses seeking, searching, to tune in on that sibilant tempest of energy. Suddenly, his ear tendrils vibrated in harmony—he caught the surging charge into shrillness of that rippling force wave.

There was a sharp click of metal on metal. With a gentle touch of one tentacle, Coeurl pushed open the door, and glided out into the dully gleaming corridor. For just a moment he felt contempt, a glow of superiority, as he thought of the stupid creatures who dared to match their wit against a coeurl. And in that moment, he suddenly thought of other coeurls. A queer, exultant sense of race pounded through his being; the driving hate of centuries of ruthless competition yielded reluctantly before pride of kinship with the future rulers of all space.

Suddenly, he felt weighed down by his limitations, his need for other coeurls, his aloneness—one against a hundred, with the stake all eternity; the starry universe itself beckoned his rapacious, vaulting ambition. If he failed, there would never be a second chance—no time to revive long-rotted machinery, and attempt to solve the secret of space travel.

He padded along on tensed paws—through the salon—into the next corridor—and came to the first bedroom door. It stood half open. One swift flow of synchronized muscles, one swiftly lashing tentacle that caught the unresisting throat of the sleeping man, crushing it; and the lifeless head rolled crazily, the body twitched once.

Seven bedrooms; seven dead men. It was the seventh taste of murder that brought a sudden return of lust, a pure, unbounded desire to kill, return of a millennium-old habit of destroying everything containing the precious id.

As the twelfth man slipped convulsively into death, Coeurl emerged abruptly from the sensuous joy of the kill to the sound of footsteps.

They were not near—that was what brought wave after wave of fright swirling into the chaos that suddenly became his brain.

The watchmen were coming slowly along the corridor toward the door of the cage where he had been imprisoned. In a moment, the first man would see the open door—and sound the alarm.

Coeurl caught at the vanishing remnants of his reason. With frantic speed, careless now of accidental sounds, he raced—along the corridor with its bedroom doors—through the salon. He emerged into the next corridor, cringing in awful anticipation of the atomic flame he expected would stab into his face.

The two men were together, standing side by side. For one single instant, Coeurl could scarcely believe his tremendous good luck. Like a fool the second had come running when he saw the other stop before the open door. They looked up, paralyzed, before the nightmare of claws and tentacles, the ferocious cat head and hate-filled eyes.

The first man went for his gun, but the second, physically frozen before the doom he saw, uttered a shriek, a shrill cry of horror that floated along the corridors—and ended in a curious gargle, as Coeurl flung the two corpses with one irre-

sistible motion the full length of the corridor. He didn't want the dead bodies found near the cage. That was his one hope.

Shaking in every nerve and muscle, conscious of the terrible error he had made, unable to think coherently, he plunged into the cage. The door clicked softly shut behind him. Power flowed once more through the electric lock.

He crouched tensely, simulating sleep, as he heard the rush of many feet, caught the vibration of excited voices. He knew when somebody actuated the cage audioscope and looked in. A few moments now, and the other bodies would be discovered.

"Siedel gone!" Morton said numbly. "What are we going to do without Siedel? And Breckenridge! And Coulter and—Horrible!"

He covered his face with his hands, but only for an instant. He looked up grimly, his heavy chin outthrust as he stared into the stern faces that surrounded him. "If anybody's got so much as a germ of an idea, bring it out."

"Space madness!"

"I've thought of that. But there hasn't been a case of a man going mad for fifty years. Dr. Eggert will test everybody, of course, and right now he's looking at the bodies with that possibility in mind."

As he finished, he saw the doctor coming through the door. Men crowded aside to make way for him.

"I heard you, commander," Dr. Eggert said, "and I think I can say right now that the space-madness theory is out. The throats of these men have been squeezed to a jelly. No human being could have exerted such enormous strength without using a machine."

Morton saw that the doctor's eyes kept looking down the corridor, and he shook his head and groaned:

"It's no use suspecting pussy, doctor. He's in his cage, pacing up and down. Obviously heard the racket and—Man alive! You can't suspect him. That cage was built to hold literally *anything*—four inches of micro-steel—and there's not a

scratch on the door. Kent, even you won't say, 'Kill him on suspicion,' because there can't be any suspicion, unless there's a new science here, beyond anything we can imagine—"

"On the contrary," said Smith flatly, "we have all the evidence we need. I used the telefluor on him—you know the arrangement we have on top of the cage—and tried to take some pictures. They just blurred. Pussy jumped when the telefluor was turned on, as if he felt the vibrations.

"You all know what Gourlay said before? This beast can apparently receive and send vibrations of any lengths. The way he dominated the power of Kent's gun is final proof of his special ability to interfere with energy."

"What in the name of all hells have we got here?" one of the men groaned. "Why, if he can control that power, and send it out in any vibrations, there's nothing to stop him killing all of us."

"Which proves," snapped Morton, "that he isn't invincible, or he would have done it long ago."

Very deliberately, he walked over to the mechanism that controlled the prison cage.

"You're not going to open the door!" Kent gasped, reaching for his gun.

"No, but if I pull this switch, electricity will flow through the floor, and electrocute whatever's inside. We've never had to use this before, so you had probably forgotten about it."

He jerked the switch hard over. Blue fire flashed from the metal, and a bank of fuses above his head exploded with a single bang.

Morton frowned. "That's funny. Those fuses shouldn't have blown! Well, we can't even look in, now. That wrecked the audios, too."

Smith said: "If he could interfere with the electric lock, enough to open the door, then he probably probed every possible danger and was ready to interfere when you threw that switch."

“At least, it proves he’s vulnerable to our energies!” Morton smiled grimly. “Because he rendered them harmless. The important thing is, we’ve got him behind four inches of the toughest of metal. At the worst we can open the door and ray him to death. But first, I think we’ll try to use the telefluor power cable—”

A commotion from inside the cage interrupted his words. A heavy body crashed against a wall, followed by a dull thump.

“He knows what we were trying to do!” Smith grunted to Morton. “And I’ll bet it’s a very sick pussy in there. What a fool he was to go back into that cage and does he realize it!”

The tension was relaxing; men were smiling nervously, and there was even a ripple of humorless laughter at the picture Smith drew of the monster’s discomfiture.

“What I’d like to know,” said Pennons, the engineer, “is, why did the telefluor meter dial jump and waver at full power when pussy made that noise? It’s right under my nose here, and the dial jumped like a house afire!”

There was silence both without and within the cage, then Morton said: “It may mean he’s coming out. Back, everybody, and keep your guns ready. Pussy was a fool to think he could conquer a hundred men, but he’s by far the most formidable creature in the galactic system. He may come out of that door, rather than die like a rat in a trap. And he’s just tough enough to take some of us with him—if we’re not careful.”

The men back slowly in a solid body; and somebody said: “That’s funny. I thought I heard the elevator.”

“Elevator!” Morton echoed. “Are you sure, man?”

“Just for a moment I was!” The man, a member of the crew, hesitated. “We were all shuffling our feet—”

“Take somebody with you, and go look. Bring whoever dared to run off back here—”

There was a jar, a horrible jerk, as the whole gigantic body of the ship careened under them. Morton was flung to the floor with a violence that stunned him. He fought back to

consciousness, aware of the other men lying all around him. He shouted: "Who the devil started those engines!"

The agonizing acceleration continued; his feet dragged with awful exertion, as he fumbled with the nearest audioscope, and punched the engine-room number. The picture that flooded onto the screen brought a deep bellow to his lips:

"It's pussy! He's in the engine room—and we're heading straight out into space."

The screen went black even as he spoke, and he could see no more.

It was Morton who first staggered across the salon floor to the supply room where the spacesuits were kept. After fumbling almost blindly into his own suit, he cut the effects of the body-torturing acceleration, and brought suits to the semiconscious men on the floor. In a few moments, other men were assisting him; and then it was only a matter of minutes before everybody was clad in metalite, with anti-acceleration motors running at half power.

It was Morton then who, after first looking into the cage, opened the door and stood, silent as the others who crowded about him, to stare at the gaping hole in the rear wall. The hole was a frightful thing of jagged edges and horribly bent metal, and it opened upon another corridor.

"I'll swear," whispered Pennons, "that it's impossible. The ten-ton hammer in the machine shops couldn't more than dent four inches of micro with one blow—and we only heard one. It would take at least a minute for an atomic disintegrator to do the job. Morton, this is a super-being."

Morton saw that Smith was examining the break in the wall. The biologist looked up. "If only Breckinridge weren't dead! We need a metallurgist to explain this. Look!"

He touched the broken edge of the metal. A piece crumbled in his finger and slithered away in a fine shower of dust to the floor. Morton noticed for the first time that there was a little pile of metallic debris and dust.

"You've hit it." Morton nodded. "No miracle of strength

here. The monster merely used his special powers to interfere with the electronic tensions holding the metal together. That would account, too, for the drain on the telefluor power cable that Pennons noticed. The thing used the power with his body as a transforming medium, smashed through the wall, ran down the corridor to the elevator shaft, and so down to the engine room."

"In the meantime, commander," Kent said quietly, "we are faced with a super-being in control of the ship, completely dominating the engine room and its almost unlimited power, and in possession of the best part of the machine shops."

Morton felt the silence, while the men pondered the chemist's words. Their anxiety was a tangible thing that lay heavily upon their faces; in every expression was the growing realization that here was the ultimate situation in their lives; their very existence was at stake and perhaps much more. Morton voiced the thought in everybody's mind:

"Suppose he wins. He's utterly ruthless, and he probably sees galactic power within his grasp."

"Kent is wrong," barked the chief navigator. "The thing doesn't dominate the engine room. We've still got the control room, and that gives us *first* control of all the machines. You fellows may not know the mechanical set-up we have; but, though he can eventually disconnect us, we can cut off all the switches in the engine room *now*. Commander, why didn't you just shut off the power instead of putting us into spacesuits? At the very least you could have adjusted the ship to the acceleration."

"For two reasons," Morton answered. "Individually, we're safer within the force fields of our spacesuits. And we can't afford to give up our advantages in panicky moves."

"Advantages! What other advantages have we got?"

"We know things about him," Morton replied. "And right now, we're going to make a test. Pennons, detail five men to each of the four approaches to the engine room. Take atomic disintegrators to blast through the big doors. They're all

shut, I noticed. He's locked himself in.

"Selenski, you go up to the control room and shut off everything except the drive engines. Gear them to the master switch, and shut them off all at once. One thing, though—leave the acceleration on full blast. No anti-acceleration must be applied to the ship. Understand?"

"Aye, sir!" The pilot saluted.

"And report to me through the communicators if any of the machines start to run again." He faced the men. "I'm going to lead the main approach. Kent, you take No. 2; Smith, No. 3, and Pennons, No. 4. We're going to find out right now if we're dealing with unlimited science, or a creature limited like the rest of us. I'll bet on the second possibility."

Morton had an empty sense of walking endlessly, as he moved, a giant of a man in his transparent space armor, along the glistening metal tube that was the main corridor of the engine-room floor. Reason told him the creature had already shown feet of clay, yet the feeling that here was an invincible being persisted.

He spoke into the communicator: "It's not use trying to sneak up on him. He can probably hear a pin drop. So just wheel up your units. He hasn't been in that engine room long enough to do anything.

"As I've said, this is largely a test attack. In the first place, we could never forgive ourselves if we didn't try to conquer him now, before he's had time to prepare against us. But, aside from the possibility that we can destroy him immediately, I have a theory.

"The idea goes something like this: Those doors are built to withstand accidental atomic explosions, and it will take fifteen minutes for the atomic disintegrators to smash them. During that period the monster will have no power. True, the drive will be on, but that's straight atomic explosion. My theory is, he can't touch stuff like that; and in a few minutes you'll see what I mean—I hope."

His voice was suddenly crisp: "Ready, Selenski?"

“Aye, ready.”

“Then cut the master switch.”

The corridor—the whole ship, Morton knew—was abruptly plunged into darkness. Morton clicked on the dazzling light of his spacesuit; the other men did the same, their faces pale and drawn.

“Blast!” Morton barked into his communicator.

The mobile units throbbed; and then pure atomic flame ravened out and poured upon the hard metal of the door. The first molten droplet rolled reluctantly, not down, but up the door. The second was more normal. It followed a shaky downward course. The third rolled sideways—for this was pure force, not subject to gravitation. Other drops followed until a dozen streams trickled sedately yet unevenly in every direction—streams of hellish, sparkling fire, bright as fairy gems, alive with the coruscating fury of atoms suddenly tortured, and running blindly, crazy with pain.

The minutes ate at time like a slow acid. At last Morton asked huskily:

“Selenski?”

“Nothing yet, commander.”

Morton half whispered: “But he must be doing something. He can’t be just waiting in there like a cornered rat. Selenski?”

“Nothing, commander.”

Seven minutes, eight minutes, then twelve.

“Commander!” It was Selenski’s voice, taut. “He’s got the electric dynamo running.”

Morton drew a deep breath, and heard one of his men say:

“That’s funny. We can’t get any deeper. Boss, take a look at this.”

Morton looked. The little scintillating streams had frozen rigid. The ferocity of the disintegrators vented in vain against metal grown suddenly invulnerable.

Morton sighed. “Our test is over. Leave two men guard-

ing every corridor. The others come up to the control room.”

He seated himself a few minutes later before the massive control keyboard. “So far as I’m concerned the test was a success. We know that of all the machines in the engine room, the most important to the monster was the electric dynamo. He must have worked in a frenzy of terror while we were at the doors.”

“Of course, it’s easy to see what he did,” Pennons said. “Once he had the power he increased the electronic tensions of the door to their ultimate.”

“The main thing is this,” Smith chimed in. “He works with vibrations only so far as his special powers are concerned, and the energy must come from outside himself. Atomic energy in its pure form, not being vibration, he can’t handle any differently than we can.”

Kent said glumly: “The main point in my opinion is that he stopped us cold. What’s the good of knowing that his control over vibrations did it? If we can’t break through those doors with our atomic disintegrators, we’re finished.”

Morton shook his head. “Not finished—but we’ll have to do some planning. First, though, I’ll start these engines. It’ll be harder for him to get control of them when they’re running.”

He pulled the master switch back into place with a jerk. There was a hum, as scores of machines leaped into violent life in the engine room a hundred feet below. The noises sank to a steady vibration of throbbing power.

Three hours later, Morton paced up and down before the men gathered in the salon. His dark hair was uncombed; the space pallor of his strong face emphasized rather than detracted from the outthrust aggressiveness of his jaw. When he spoke, his deep voice was crisp to the point of sharpness:

“To make sure that our plans are full coordinated, I’m going to ask each expert in turn to outline his part in the overpowering of this creature. Pennons first!”

Pennons stood up briskly. He was not a big man, Morton thought, yet he looked big, perhaps because of his air of

authority. This man knew engines, and the history of engines. Morton had heard him trace a machine through its evolution from a simple toy to the highly complicated modern instrument. He had studied machine development on a hundred planets; and there was literally nothing fundamental that he didn't know about mechanics. It was almost weird to hear Pen-nons, who could have spoken for a thousand hours and still only have touched upon his subject, say with absurd brevity:

“We've set up a relay in the control room to start and stop every engine rhythmically. The trip lever will work a hundred times a second, and the effect will be to create vibrations of every description. There is just a possibility that one or more of the machines will burst, on the principle of soldiers crossing a bridge in step—you've heard that old story, no doubt—but in my opinion there is no real danger of a break of that tough metal. The main purpose is simply to interfere with the interference of the creature, and smash through the doors.”

“Gourlay next!” barked Morton.

Gourlay climbed lazily to his feet. He looked sleepy, as if he was somewhat bored by the whole proceedings, yet Morton knew he loved people to think him lazy, a good-for-nothing slouch, who spent his days in slumber and his nights catching forty winks. His title was chief communication engineer, but his knowledge extended to every vibration field; and he was probably, with the possible exception of Kent, the fastest thinker on the ship. His voice drawled out, and—Morton noted—the very deliberate assurance of it had a soothing effect on the men—anxious faces relaxed, bodies leaned back more restfully:

“Once inside,” Gourlay said, “we've rigged up vibration screens of pure force that should stop nearly everything he's got on the ball. They work on the principle of reflection, so that everything he sends will be reflected back to him. In addition, we've got plenty of spare electric energy that we'll just feed him from mobile copper cups. There must be a limit to his

capacity for handling power with those insulated nerves of his.”

“Selenski!” called Morton.

The chief pilot was already standing, as if he had anticipated Morton’s call. And that, Morton reflected, was the man. His nerves had that rocklike steadiness which is the first requirement of the master controller of a great ship’s movements; yet that very steadiness seemed to rest on dynamite ready to explode at its owner’s volition. He was not a man of great learning, but he “reacted” to stimuli so fast that he always seemed to be anticipating.

“The impression I’ve received of the plan is that it must be cumulative. Just when the creature thinks that he can’t stand any more, another thing happens to add to his trouble and confusion. When the uproar’s at its height, I’m supposed to cut in the anti-accelerators. The commander thinks with Gunlie Lester that these creatures will know nothing about anti-acceleration. It’s a development, pure and simple, of the science of interstellar flight, and couldn’t have been developed in any other way. We think when the creature feels the first effects of the anti-acceleration—you all remember the caved-in feeling you had the first month—it won’t know what to think or do.”

“Korita next.”

“I can only offer you encouragement,” said the archeologist, “on the basis of my theory that the monster has all the characteristics of a criminal of the early ages of any civilization, complicated by an apparent reversion to primitiveness. The suggestion has been made by Smith that his knowledge of science is puzzling, and could only mean that we are dealing with an actual inhabitant, not a descendant of the inhabitants of the dead city we visited. This would ascribe virtual immortality to our enemy, a possibility which is borne out by his ability to breathe both oxygen and chlorine—or neither—but even that makes no difference. He comes from a certain age in his civilization; and he has sunk so low that his ideas are mostly

memories of that age.

“In spite of all the powers of his body, he lost his head in the elevator the first morning, until he remembered. He placed himself in such a position that he was forced to reveal his special powers against vibrations. He bungled the mass murders a few hours ago. In fact, his whole record is one of the low cunning of the primitive, egotistical mind which has little or no conception of the vast organization with which it is confronted.

“He is like the ancient German soldier who felt superior to the elderly Roman scholar, yet the latter was part of a mighty civilization of which the Germans of that day stood in awe.

“You may suggest that the sack of Rome by the Germans in later years defeats my argument; however, modern historians agree that the ‘sack’ was an historical accident, and not history in the true sense of the word. The movement of the ‘Sea-peoples’ which set in against the Egyptian civilization from 1400 B.C. succeeded only as regards the Cretan island-realm—their mighty expeditions against the Libyan and Phoenician coasts, with the accompaniment of Viking fleets, failed as those of the Huns failed against the Chinese Empire. Rome would have been abandoned in any event. Ancient, glorious Samarra was desolate by the tenth century; Pataliputra, Asoka’s great capital, was an immense and completely uninhabited waste of houses when the Chinese traveler Hsi-nan-tang visited it about A.D. 635.

“We have, then, a primitive, and that primitive is now far out in space, completely outside of his natural habitat. I say, let’s go in and win.”

One of the men grumbled, as Korita finished: “You can talk about the sack of Rome being an accident, and about this fellow being a primitive, but the facts are facts. It looks to me as if Rome is about to fall again; and it won’t be no primitive that did it, either. This guy’s got plenty of what it takes.”

Morton smiled grimly at the man, a member of the

crew. "We'll see about that—right now!"

In the blazing brilliance of the gigantic machine shop, Coeurl slaved. The forty-foot, cigar-shaped spaceship was nearly finished. With a grunt of effort, he completed the laborious installation of the drive engines, and paused to survey his craft.

Its interior, visible through the one aperture in the outer wall, was pitifully small. There was literally room for nothing but the engines—and a narrow space for himself.

He plunged frantically back to work as he heard the approach of the men, and the sudden change in the tempest-like thunder of the engines—a rhythmical off-and-on hum, shriller in tone, sharper, more nerve-racking than the deep-throated, steady throb that had preceded it. Suddenly, there were the atomic disintegrators again at the massive outer doors.

He fought them off, but never wavered from his task. Every mighty muscle of his powerful body strained as he carried great loads of tools, machines and instruments, and dumped them into the bottom of his makeshift ship. There was no time to fit anything into place, no time for anything—no time—no time.

The thought pounded at his reason. He felt strangely weary for the first time in his long and vigorous existence. With a last, tortured heave, he jerked the gigantic sheet of metal into the gaping aperture of the ship—and stood there for a terrible minute, balancing it precariously.

He knew the doors were going down. Half a dozen disintegrators concentrating on one point were irresistibly, though slowly, eating away the remaining inches. With a gasp, he released his mind from the doors and concentrated every ounce of his mind on the yard-thick outer wall, toward which the blunt nose of his ship was pointing.

His body cringed from the surging power that flowed from the electric dynamo through his ear tendrils into that resisting wall. The whole inside of him felt on fire, and he knew that he was dangerously close to carrying his ultimate load.

And still he stood there, shuddering with the awful pain, holding the unfastened metal plate with hard-clenched tentacles. His massive head pointed as in dread fascination at that bitterly hard wall.

He heard one of the engine-room doors crash inward. Men shouted; disintegrators rolled forward, their raging power unchecked. Coeurl heard the floor of the engine room hiss in protest, as those beams of atomic energy tore everything in their path to bits. The machines rolled closer; cautious footsteps sounded behind them. In a minute they would be at the flimsy doors separating the engine room from the machine shop.

Suddenly, Coeurl was satisfied. With a snarl of hate, a vindictive glow of feral eyes, he ducked into his little craft, and pulled the metal plate down into place as if it was a hatchway.

His ear tendrils hummed, as he softened the edges of the surrounding metal. In an instant, the plate was more than welded—it was part of his ship, a seamless, rivetless part of a whole that was solid opaque metal except for two transparent areas, one in the front, one in the rear.

His tentacle embraced the power drive with almost sensuous tenderness. There was a forward surge of his fragile machine, straight at the great outer wall of the machine shops. The nose of the forty-foot craft touched—and the wall dissolved in a glittering shower of dust.

Coeurl felt the barest retarding movement; and then he kicked the nose of the machine out into the cold of space, twisted it about, and headed back in the direction from which the big ship had been coming all these hours.

Men in space armor stood in the jagged hole that yawned in the lower reaches of the gigantic globe. The men and the great ship grew smaller. Then the men were gone; and there was only the ship with its blaze of a thousand blurring portholes. The ball shrank incredibly, too small now for individual portholes to be visible.

Almost straight ahead, Coeurl saw a tiny, dim, reddish

ball—his own sun, he realized. He headed toward it at full speed. There were caves where he could hide and with other coeurls build secretly a spaceship in which they could reach other planets safely—now that he knew how.

His body ached from the agony of acceleration, yet he dared not let up for a single instant. He glanced back, half in terror. The globe was still there, a tiny dot of light in the immense blackness of space. Suddenly it twinkled and was gone.

For a brief moment, he had the empty, frightened impression that just before it disappeared, it moved. But he could see nothing. He could not escape the belief that they had shut off all their lights, and were sneaking up on him in the darkness. Worried and uncertain, he looked through the forward transparent plate.

A tremor of dismay shot through him. The dim red sun toward which he was heading was not growing larger. *It was becoming smaller* by the instant, and it grew visibly tinier during the next five minutes, became a pale-red dot in the sky—and vanished like the ship.

Fear came then, a blinding surge of it, that swept through his being and left him chilled with the sense of the unknown. For minutes, he stared frantically into the space ahead, searching for some landmark. But only the remote stars glimmered there, unwinking points against a velvet background of unfathomable distance.

Wait! One of the points was growing larger. With every muscle and nerve tensed, Coeurl watched the point becoming a dot, a round ball of light—red light. Bigger, bigger, it grew. Suddenly, the red light shimmered and turned white—and there, before him, was the great globe of the spaceship, lights glaring from every porthole, the very ship which a few minutes before he had watched vanish behind him.

Something happened to Coeurl in that moment. His brain was spinning like a flywheel, faster, faster, more incoherently. Suddenly, the wheel flew apart into a million aching fragments. His eyes almost started from their sockets as, like a

maddened animal, he raged in his small quarters.

His tentacles clutched at precious instruments and flung them insensately; his paws smashed in fury at the very walls of his ship. Finally, in a brief flash of sanity, he knew that he couldn't face the inevitable fire of atomic disintegrators.

It was a simple thing to create the violent disorganization that freed every drop of id from his vital organs.

They found him lying dead in a little pool of phosphorus.

"Poor pussy," said Morton. "I wonder what he thought when he saw us appear ahead of him, after his own sun disappeared. Knowing nothing of anti-accelerators, he couldn't know that we could stop short in space, whereas it would take him more than three hours to decelerate; and in the meantime he'd be drawing farther and farther away from where he wanted to go. He couldn't know that by stopping, we flashed past him at millions of miles a second. Of course, he didn't have a chance once he left our ship. The whole world must have seemed topsy-turvy."

"Never mind the sympathy," he heard Kent say behind him. "We've got a job—to kill every cat in that miserable world."

Korita murmured softly: "That should be simple. They are but primitives; and we have merely to sit down, and they will come to us, cunningly expecting to delude us."

Smith snapped: "You fellows make me sick! Pussy was the toughest nut we ever had to crack. He had everything he needed to defeat us—"

Morton smiled as Korita interrupted blandly: "Exactly, my dear Smith, except that he reacted according to the biological impulses of his type. His defeat was already foreshadowed when we unerringly analyzed him as a criminal from a certain era of his civilization.

"It was history, honorable Mr. Smith, our knowledge of history that defeated him," said the Japanese archaeologist, reverting to the ancient politeness of his race.

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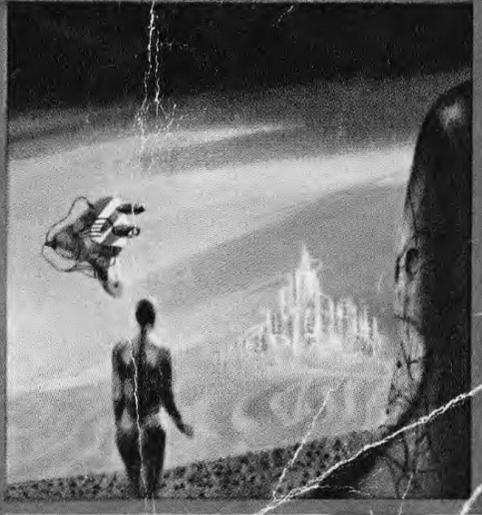
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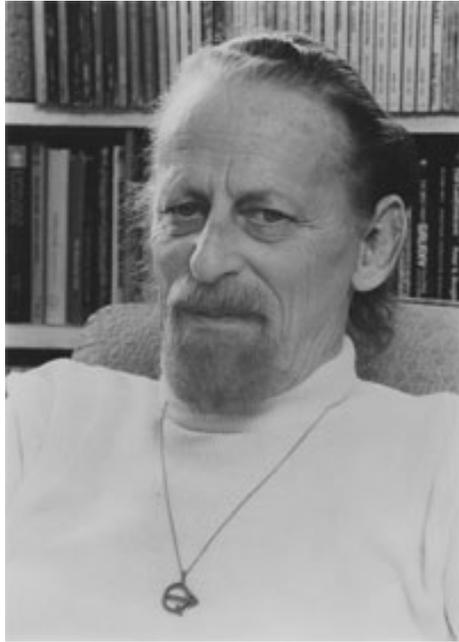
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EDITED BY

August Derleth



Theodore Sturgeon was born Edward Hamilton Waldo in New York City on February 26, 1918. His parents divorced when he was nine years old, and his mother married William Sturgeon. It was about this time he changed his name from Ed Waldo to Ted Sturgeon. On his page at Emory University, Dr. Eric Weeks, a physicist, says the name change was “because he liked the nickname ‘Ted’.”



Theodore Sturgeon is credited with over two hundred stories and heralded as one of the greats by almost everyone. Most twentieth century collections of science fiction included at least one of his stories. The University of Kansas’ Gunn Center for the Study of Science Fiction instituted the Theodore Sturgeon Memorial Award for the best short science fiction of the year in 1987 and is awarded annually.

He coined what is now referred to as “Sturgeon’s Law” even though he never referred to it as such when he said of science fiction “Ninety percent of it is crud, but then, ninety percent of *everything* is crud.”

Like some other authors in this opus, he is in the Science Fiction and Fantasy Hall of Fame, inducted in 2000.

He was the inspiration for the recurrent character of Kilgore Trout in Kurt Vonnegut’s novels.

He originated Star Trek’s Vulcan mating ritual in the screenplay for *Amok Time*, which garnered him a Hugo award. It was the only Star Trek episode that featured the planet Vulcan until the film *The Search for Spock*.

The Encyclopedia of Science Fiction says “Sturgeon was a central contributor to and shaper of John W Campbell Jr’s so-called Golden Age of SF, though less comfortably than his colleagues, as even in those early years, while obeying the generic commands governing the creation of Campbellian technological or Hard SF, he was also writing sexually threatening, explorative tales, which he found difficult to publish domestically; *Bianca’s Hands* (May 1947 *Argosy*), for instance, never appeared in an American magazine.”

He won both the Hugo and Nebula for *Slow Sculpture*.

There is an interesting snippet in *Kirkus Reviews*: “The husband of a prominent writer for the True Confessional pulp market showed him a copy of *Unknown* magazine, edited by John W. Campbell Jr. at Street and Smith Publications. ‘This is the kind of thing you ought to try and write,’ he told him. Interested and inspired, he wrote up a story, only to have it rejected by Campbell, and followed up with another, ‘The God in a Garden,’ which Campbell accepted and published in the October 1939 issue of *Unknown*. The success of the story prompted him to quit his job at sea and focus on writing.”

He died on May 8, 1985 in Eugene, Oregon, of lung fibrosis.

The following story is scanned from the original magazine, so it appears appears exactly as it did in the original *Worlds of Tomorrow* magazine.

The Martian and The Moron

BY THEODORE STURGEON

IN 1924, when I was just a pup, my father was a thing known currently as a "radio bug." These creatures were wonderful. They were one part fanatic, one part genius, a dash of child-like wonderment, and two buckets full of trial-and-error. Those were the days when you could get your picture in the paper for building a crystal set in something small and more foolish than the character who had his picture in the paper the day before. My father had his picture in there for building a "set" on a pencil eraser with a hunk of galena in the top and about four thousand turns of No. 35 enamelled wire wrapped around it. When they came around to take his picture he dragged out another one built into a peanut. Yes, a real peanut which brought in WGBS, New York. (You see, I really do remember.) They wanted to photograph that too, but Dad thought it would be a little immodest for him to be in the paper twice. So they took Mother's picture with it. The following week they ran both pictures, and Dad got two letters from other radio bugs saying his eraser radio wouldn't work and Mother got two hundred and twenty letters forwarded from the paper, twenty-six of which contained proposals of marriage. (Of course Mother was a YL and not an OW then.)

Oddly enough, Dad never did become a radio man.

Theodore Sturgeon

He seemed satisfied to be the first in the neighborhood to own a set, then to build a set (after the spider-web coil phase he built and operated a one-tube regenerative set which featured a UX-11 detector and a thing called a vario-coupler which looked like a greasy fist within a lacquered hand, and reached his triumph when he hooked it into a forty-'leven pound "B-eliminator" and ran it right out of the socket like a four-hundred-dollar "electric" radio), and first in the state to be on the receiving end of a court-order restraining him from using his equipment. (Every time he touched the tuning dials—three—the neighboring radios with which Joneses were keeping up with each other, began howling unmercifully.) So for a time he left his clutter of forms and wire and solder-spattered "Bathtub" condensers shoved to the back of his cellar workbench, and went back to stuffing field mice and bats, which had been his original hobby. I think Mother was glad, though she hated the smells he made down there. That was after the night she went to bed early with the cramps, and he DX'd WLS in Chicago at four-thirty one morning with a crystal set, and wanted to dance. (He learned later that he had crossed aials with Mr. Bohackus next door, and had swiped Mr. Bohackus' fourteen-tube Atwater-Kent signal right out of Mr. Bohackus' goose-neck megaphone speaker. Mr. Bohackus was just as unhappy as Mother to hear about this on the following morning. They had both been up all night.)

Dad never was one to have his leg pulled. He got very sensitive about the whole thing, and learned his lesson so well that when the last great radio fever took him, he went to another extreme. Instead of talking his progress all over the house and lot, he walled himself up. During the late war I ran up against security regulations—and

THE MARTIAN AND THE MORON

who didn't—but they never bothered me. I had my training early.

He got that glint in his eye after grunting loudly over the evening paper one night. I remember Mother's asking him about it twice, and I remember her sigh—her famous "here we go again" sigh—when he didn't answer. He leapt up, folded the paper, got out his keys, opened the safe, put the paper in it, locked the safe, put his keys away, looked knowingly at us, strode out of the room, went down into the cellar, came up from the cellar, took out his keys, opened the safe, took out the paper, closed the safe, looked knowingly at us again, said, "Henry, your father's going to be famous," and went down into the cellar.

Mother said, "I knew it. I *knew* it! I should have thrown the paper away. Or torn out that page."

"What's he going to make, Mother?" I asked.

"Heaven knows," she sighed. "Some men are going to try to get Mars on the radio."

"Mars? You mean the star?"

"It isn't a star, dear, it's a planet. They've arranged to turn off all the big radio stations all over the world for five minutes every hour so the men can listen to Mars. I suppose your father thinks he can listen too."

"Gee," I said, "I'm going down and—"

"You're going to do no such thing," said Mother firmly. "Get yourself all covered with that nasty grease he uses in his soldering, and stay up until all hours! It's almost bedtime. And—Henry—"

"Yes, Mother?"

She put her hands on my shoulders. "Listen to me, darling. People have been—ah—teasing your father." She meant Mr. Bohackus. "Don't ask him any questions about this if he doesn't want to talk, will you, darling? Promise?"

"All right, Mother." She was a wise woman.

Dad bought a big, shiny brass padlock for his workshop in the cellar, and every time Mother mentioned the cellar, or the stars, or radio to him in any connection, he would just smile knowingly at her. It drove her wild. She didn't like the key, either. It was a big brass key, and he wore it on a length of rawhide shoelace tied around his neck. He wore it day and night. Mother said it was lumpy. She also said it was dangerous, which he denied, even after the time down at Roton Point when we were running Mr. Bohackus' new gasoline-driven ice-cream freezer out on the beach. Dad leaned over to watch it working. He said, "This is the way to get thing done, all right. I can't wait to get into that ice-cream," and next thing we knew he was face down in the brine and flopping like a banked trout. We got him out before he drowned or froze. He was bleeding freely about the nose and lips, and Mr. Bohackus was displeased because Dad's key had, in passing through the spur-gears in which it had caught, broken off nine teeth. That was six more than Dad lost, but it cost much more to fix Dad's and showed, Mother said, just how narrow-minded Mr. Bohackus was.

Anyway, Dad never would tell us what he was doing down in the cellar. He would arrive home from work with mysterious packages and go below and lock them up before dinner. He would eat abstractedly and disappear for the whole evening. Mother, bless her, bore it with fortitude. As a matter of fact, I think she encouraged it. It was better than the previous fevers, when she had to sit for hours listening to crackling noises and organ music through big, heavy, magnetic earphones—or else. At least she was left to her own devices while all this was going on. As for me, I knew when I wasn't needed, and, as I remember, managed to fill my life quite successfully

THE MARTIAN AND THE MORON

with clock movements, school, and baseball, and ceased to wonder very much.

About the middle of August Dad began to look frantic. Twice he worked right through the night, and though he went to the office on the days that followed, I doubt that he did much. On August 21—I remember the date because it was the day before my birthday, and I remember that it was a Thursday because Dad took the next day off for a “long week end,” so *it* must have been Friday—the crisis came. My bedtime was nine o’clock. At nine-twenty Dad came storming up from the cellar and demanded that I get my clothes on instantly and go out and get him two hundred feet of No. 27 silk-covered wire. Mother laid down the law and was instantly overridden. “The coil! The one coil I haven’t finished!” he shouted hysterically. “Six thousand meters, and I have to run out of it. *Get* your clothes on this instant, Henry, number twenty-seven wire. Just control yourself this once Mother and you can have—Henry stop standing there with your silly eyes bulging and get dressed—you can have any hat on Fifth Avenue—*hurry!*”

I hurried. Dad gave me some money and a list of places to go to, told me not to come back until I’d tried every one of them, and left the house with me. I went east, he went west. Mother stood on the porch and wrung her hands.

I got home about twenty after ten, weary and excited, bearing a large metal spool of wire. I put it down triumphantly while Mother caught me up and felt me all over as if she had picked me up at the root of a cliff. She looked drawn. Dad wasn’t home yet.

After she quieted down a little she took me into the kitchen and fed me some chocolate-covered doughnuts. I forget what we talked about, if we talked, but I do remember that the cellar door was ajar, and at the bottom

Theodore Sturgeon

of the steps I could see a ray of yellow light. "Mother," I said, "you know what? Dad ran out and left his workshop open."

She went to the door and looked down the stairs.

"Darling," she said after a bit, "Uh—wouldn't you like to—I mean, if he—"

I caught on quick. "I'll look. Will you stay up here and bump on the floor if he comes?"

She looked relieved, and nodded. I ran down the steps and cautiously entered the little shop.

Lined up across the bench were no less than six of the one-tube receivers which were the pinnacle of Dad's electronic achievement. The one at the end was turned back-to-front and had its rear shielding off; a naked coil-form dangled unashamedly out.

And I saw what had happened to the two alarm clocks which had disappeared from the bedrooms in the past six weeks. It happened that then, as now, clocks were my passion, and I can remember clearly the way he had set up pieces of the movements.

He had built a frame about four feet long on a shelf at right angles to the bench on which the radios rested. At one end of the frame was a clock mechanism designed to turn a reel on which was an endless band of paper tape about eight inches wide. The tape passed under a hooded camera—Mother's old Brownie—which was on a wall-bracket and aimed downward, on the tape. Next in line, under the tape, were six earphones, so placed that their diaphragms (the retainers had been removed) just touched the under side of the tape. And at the other end of the frame was the movement from the second alarm clock. The bell-clapper hung downwards, and attached to it was a small container of black powder.

I went to the first clock mechanism and started it by pulling out the toothpick Dad had jammed in the gears.

THE MARTIAN AND THE MORON

The tape began to move. I pulled the plug on the other movement. The little container of black powder began to shake like mad and, through small holes, laid an even film of the powder over the moving tape. It stopped when it had put down about ten inches of it. The black line moved slowly across until it was over the phones. The magnets smeared the powder, which I recognized thereby as iron filings. Bending to see under the tape, I saw that the whole bank of phones was levered to move downward a half an inch away from the tape. The leads from each of the six phones ran to a separate receiver.

I stood back and looked at this Goldberg and scratched my head, then shook same and carefully blew away the black powder on the tape, rewound the movements, refilled the containers from a jar which stood on the bench, and put the toothpick back the way I had found it.

I was halfway up the stairs when the scream of burning rubber on the street outside coincided with Mother's sharp thumping on the floor. I got to her side as she reached the front window. Dad was outside paying off a taxi driver. He never touched the porch steps at all, and came into the house at a dead run. He had a package under his arm.

"Fred!" said Mother.

"Can't stop now," he said, skidding into the hallway. "Couldn't get twenty-seven anywhere. Have to use twenty-five. Probably won't work. Everything happens to me, absolutely everything." He headed for the kitchen.

"I got you a whole reel of twenty-seven, Dad."

"Don't bother me now. Tomorrow," he said, and thumped downstairs. Mother and I looked at each other. Mother sighed. Dad came bounding back up the stairs. "You *what?*"

"Here." I got the wire off the hall table and gave it

Theodore Sturgeon

to him. He snatched it up, hugged me, swore I'd get a bicycle for my birthday (he made good on that, and on Mother's Fifth Avenue hat, too, by the way), and dove back downstairs.

We waited around for half an hour and then Mother sent me to bed. "You poor baby," she said, but I had the idea it wasn't me she was sorry for.

Now I'd like to be able to come up with a climax to all this, but there wasn't one. Not for years and years. Dad looked, the next morning, as if he had been up all night again—which he had—and as if he were about to close his fingers on the Holy Grail. All that day he would reappear irregularly, pace up and down, compare his watch with the living-room clock and the hall clock, and sprint downstairs again. That even went on during my birthday dinner. He had Mother call up the office and say he had Twonk's disease, and kept up his peregrinations all that night and all the following day until midnight. He fell into bed, so Mother told me, at 1:00 A.M. Sunday morning and slept right through until supper-time. He still maintained a dazzling silence about his activities. For the following four months he walked around looking puzzled. For a year after that he looked resigned. Then he took up stuffing newts and moles. The only thing he ever said about the whole crazy business was that he was born to be disappointed, but at least, this time, no one could rib him about it. Now I'm going to tell you about Cordelia.

This happened years and years later. The blow-off was only last week, as a matter of fact. I finished school and went into business with Dad and got mixed up in the war and all that. I didn't get married, though. Not yet. That's what I want to tell you about.

I met her at a party at Ferris'. I was staggng it, but I don't think it would have made any difference if I had

THE MARTIAN AND THE MORON

brought someone; when I saw Cordelia I was, to understate the matter, impressed.

She came in with some guy I didn't notice at the time and, for all I know, haven't seen since. She slipped out of her light wrap with a single graceful movement; the sleeve caught in her bracelet, and she stood there, full profile, in the doorway, both arms straight and her hands together behind her as she worried the coat free, and I remember the small explosion in my throat as my indrawn breath and my gasp collided. Her hair was dark and lustrous, parted in a wide winging curve away from her brow. There were no pins in it; it shadowed the near side of her face as she bent her head toward the room. The cord of her neck showed columnar and clean. Her lips were parted ever so slightly, and showed an amused chagrin. Her lashes all but lay on her cheeks. She came across to my side of the room and sat down while the Thing who was with her went anonymously away to get her a drink and came unnoticeably back.

I said to myself, "Henry, my boy, stop staring at the lady. You'll embarrass her."

She turned to me just then and gave me a small smile. Her eyes were widely spaced, and the green of deep water. "I don't mind, really," she said, and I realized I had spoken aloud. I took refuge in a grin, which she answered, and then her left eyelid dropped briefly, and she looked away. It was a wink, but such a slight, tasteful one! If she had used both eyelids, it wouldn't have been a wink at all; she would have looked quickly down and up again. It was an understanding, we're-together little wink, a tactful, gracious, wonderful, marvellous, do you begin to see how I felt?

The party progressed. I once heard somebody decline an invitation to one of Ferris' parties on the grounds that he had *been* to one of Ferris' parties. I tend to be a

Theodore Sturgeon

little more liberal than that, but tonight I could see the point. It was because of Cordelia. She sat still, her chin on the back of her hand, her fingers curled against her white throat, her eyes shifting lazily from one point in the room to another. She did not belong in this conglomeration of bubbleheads. Look at her—part Sphinx, part Pallas Athena. . . .

Ferris was doing his Kasbah act, with the bath towel over his head. He will next imitate Clyde McCoy's trumpet, I thought. He will then inevitably put that lamp shade on his head, curl back his upper lip, and be a rickshaw coolie. Following which he will do the adagio dance in which he will be too rough with some girl who will be too polite to protest at his big, shiny, wet climaxing kiss.

I looked at Cordelia and I looked at Ferris and I thought, no, Henry; that won't do. I drew a deep breath, leaned over to the girl, and said, "If there were a fire in here, do you know the quickest way out?"

She shook her head expectantly.

"I'll show you," I said, and got up. She hesitated a charming moment, rose from her chair as with helium, murmured something polite to her companion, and came to me.

There were French doors opening on the wide terrace porch which also served the front door. We went through them. The air was fragrant and cool, and there was a moon. She said nothing about escaping from fires. The French doors shut out most of the party noises—enough so that we could hear night sounds. We looked at the sky. I did not touch her.

After a bit she said in a voice of husky silver,

*"Is the moon tired? she looks so pale
Within her misty veil;*

THE MARTIAN AND THE MORON

*She scales the sky from east to west,
And takes no rest.*

*"Before the coming of the night
The moon shows papery white;
Before the dawning of the day
She fades away."*

It was simple and it was perfect. I looked at her in wonderment. "Who wrote that?"

"Christina Rosset-ti," she said meticulously, looking at the moon. The light lay on her face like dust, and motes of it were caught in the fine down at the side of her jaw.

"I'm Henry Folwell and I know a place here we could talk for about three hours if we hurry," I said, utterly amazed at myself, "I don't generally operate like this."

She looked at the moon and me, the slight deep smile playing subtly with her lips. "I'm Cordelia Thorne, and I couldn't think of it," she said. "Do you think you could get my wrap without anyone seeing? It's a—"

"I know what it is," I said, sprinting. I went in through the front door, located her coat, bunched it up small, skinned back outside, shook it out and brought it to her. "You're still here," I said incredulously.

"Did you think I'd go back inside?"

"I thought the wind, or the gods, or my alarm clock would take you away."

"You said that beautifully," she breathed, as I put the coat around her shoulders. I thought I had too. I notched her high up in my estimation as a very discerning girl.

We went to a place called the Stroll Inn where a booth encased us away from all of the world and most of its lights. It was wonderful. I think I did most of the talking. I don't remember all that passed between us but I remember these things, and remember them well.

Theodore Sturgeon

I was talking about Ferris and the gang he had over there very Saturday night; I checked myself, shrugged, and said, "Oh well. *Chacun à sa gouïte*, as they say, which means—"

And she stopped me. "Please. Don't translate. It couldn't be phrased as well in English."

I had been about to say "—which means Jack's son has the gout." I felt sobered and admiring, and just sat and glowed at her.

And then there was that business with the cigarette. She stared at it as it lay in the ash tray, followed it with her gaze to my lips and back as I talked, until I asked her about it.

She said in a soft, shivery voice, "I feel just like that cigarette."

I, of course, asked her why.

"You pick it up," she whispered, watching it. "You enjoy some of it. You put it down and let it—smolder. You like it, but you hardly notice it. . . ."

I thereupon made some incredibly advanced protestations.

And there was the business about her silence—a long, faintly amused, inward-turning silence. I asked her what she was thinking about.

"I was ruminating," she said, in a self-depreciating, tragic voice, "on the futility of human endeavor," and she smiled. And when I asked her what she meant, she laughed aloud and said, "Don't you know?" And I said, "Oh. That," and worshipped her. She was deep. I'd have dropped dead before I'd have admitted I didn't know what specifically she was driving at.

And books. Music, too. When we were at the stage where I had both her hands and for minutes on end our foreheads were so close together you couldn't have slipped a swizzlestick between them, I murmured, "We

THE MARTIAN AND THE MORON

seem to think so much alike. . . . Tell me, Cordelia, have you read Cabell?"

She said, "Well, really," in such a tone that, so help me, I apologized. "Love stuff," I said, recovering.

She looked reminiscently over my shoulder, smiling her small smile. "So lovely."

"I knew you'd read him," I said, struck with sweet thunder. "And Faulkner—have you read any of Faulkner?"

She gave me a pitying smile. I gulped and said, "Ugly, isn't it?"

She looked reminiscently over my other shoulder, a tiny frown flickering brow. "So ugly," she said.

In between times she listened importantly to my opinions on Faulkner and Cabell. And Moussorgsky and Al Jolson. She was wonderful, and we agreed in everything.

And, hours later, when I stood with her at her door, I couldn't do a thing but shuffle my feet and haul on the hem of my jacket. She gave me her hand gravely, and I think she stopped breathing. I said, "Uh, well," and couldn't improve on it. She swept her gaze from my eyes to my mouth, from side to side across my forehead; it was a tortured "No!" her slightly turning head articulated, and her whole body moved minutely with it. She let go my hand, turned slowly toward the door, and then, with a cry which might have been a breath of laughter and which might have been a sob, she pirouetted back to me and kissed me—not on the mouth, but in the hollow at the side of my neck. My fuse blew with a snap and a bright light and, as it were, incapacitated my self-starter. She moved deftly then, and to my blurred vision, apparently changed herself into a closed door. I must have stood looking at that door for twenty minutes before I turned and walked dazedly home.

I saw her five more times. Once it was a theater party,

Theodore Sturgeon

and we all went to her house afterward, and she showed great impartiality. Once it was a movie, and who should we run into afterward but her folks. Very nice people. I liked them and I think they liked me. Once it was the circus; we stayed very late, dancing at a pavilion, and yet the street was still crowded outside her home when we arrived there, and a handshake had to do. The fourth time was at a party to which I went alone because she had a date that night. It devolved that the date was the same party. The way she came in did things to me. It wasn't the fact that she was with somebody else; I had no claim on her, and the way she acted with me made me feel pretty confident. It was the way she came in, slipping out of her wrap, which—caught on her—bracelet, freezing her in profile while framed in the doorway . . . I don't want to think about it. Not now.

I did think about it; I left almost immediately so that I could. I went home and slumped down in an easy-chair and convinced myself about coincidences, and was almost back to normal when Dad came into the room.

"Argh!" he said.

I leapt out of the chair and helped him to pick himself up off the middle of the rug. "Blast it, boy," he growled, "why don't you turn on a light? What are you doing home? I thought you were out with your goddess. Why can't you pick up your big bony feet, or at least leave them somewhere else besides in the doorway of a dark room?" He dusted off his knees. He wasn't hurt. It's a deep-piled rug with two cushions under it. "You're a howling menace. Kicking your father." Dad had mellowed considerably with the years. "What's the matter with you anyhow? She do something to you? Or are you beginning to have doubts?" He wore glasses now, but he saw plenty. He'd ribbed me about Cordelia as only a man who can't stand ribbing himself could do.

THE MARTIAN AND THE MORON

"It was a lousy party," I said.

He turned on a light, "What's up, Henry?"

"Nothing," I said. "Absolutely nothing. I haven't had a fight with her, if that's what you're digging for."

"All right, then," he said, picking up the paper.

"There's nothing wrong with her. She's one of the most wonderful people I know, that's all."

"Sure she is." He began to read the paper.

"She's deep, too. A real wise head, she is. You wouldn't expect to find that in somebody as young as that. Or as good-looking." I wished he would put his eyebrows down.

"She's read everything worth reading," I added as he turned a page a minute later.

"Marvellous," he said flatly.

I glared at him. "What do you mean by that?" I barked. "What's marvellous?"

He put the paper down on his knee and smoothed it. His voice was gentle. "Why Cordelia, of course. I'm not arguing with you, Henry."

"Yes, you—well, anyway, you're not saying what you think."

"You don't want to hear what I think."

"I know what I want!" I flared.

He crackled the paper nervously. "My," he said as if to himself, "this is worse than I thought." Before I could interrupt, he said, "Half of humanity doesn't know what it wants or how to find out. The other half knows what it wants, hasn't got it, and is going crazy trying to convince itself that it already has it."

"Very sound," I said acidly. "Where do you peg me?"

He ignored this. "The radio commercial which annoys me most," he said with apparent irrelevancy, "is the one which begins. 'There are some things so good they don't have to be improved.' That annoys me because there isn't

a thing on God's green earth, which couldn't stand improvement. By the same token, if you find something which looks to you as if it's unimprovable, then either it's a mirage or you're out of your mind."

"What has that to do with Cordelia?"

"Don't snap at me, son," Dad said quietly. "Let's operate by the rule of reason here. Or must I tear your silly head off and stuff it down your throat?"

I grinned in spite of myself. "Reason prevails, Dad. Go on."

"Now, I've seen the girl, and you're right; she's striking to look at. Extraordinary. In the process of raving about that you've also told me practically every scrap of conversation you've ever had with her."

"I have?"

"You're like your mother; you talk too much," he smiled. "Don't get flustered. It was good to listen to. Shows you're healthy. But I kept noticing one thing in these mouthings—all she's read, all the languages she understands, all the music she likes—and that is that you have never quoted her yet as saying a single declarative sentence. You have never quoted her as opening a conversation, changing the subject, mentioning something you both liked *before* you mentioned it, or having a single idea that you didn't like." He shrugged. "Maybe she is a good listener. They're—"

"Now wait a minute—"

"—They're rare anywhere in the world, especially in this house," he went on smoothly. "Put your hands back in your pockets, Henry, or sit on 'em until I've finished. Now, I'm not making any charges about Cordelia. There aren't any. She's wonderful. That's the trouble. For Pete's sake get her to make a flat statement."

"She has, plenty of times," I said hotly. "You just don't know her! Why, she's the most—"

THE MARTIAN AND THE MORON

He put up his hands and turned his head as if I were aiming a bucket of water at him. "Shut up!" he roared. I shut. "Now," he said, "listen to me. If you're right, you're right and there's no use defending anything. If you're wrong you'd better find it out soon before you get hurt. But I don't want to sit here and watch the process. I know how you tick, Henry. By gosh, I ought to. You're like I was. You and I, we get a hot idea and go all out for it, all speed and no control. We spill off at the mouth until we have the whole world watching; and when the idea turns sour the whole world gets in its licks, standing around laughing. Keep your beautiful dreams to yourself. If they don't pan out you can always kick yourself effectively enough, without having every wall-eyed neighbor helping you."

A picture of Mr. Bohackus with the protruding china-blue eyes, our neighbor of long ago, crossed my mind, and I chuckled.

"That's better, Henry," said Dad. "Listen. When a fellow gets to be a big grownup man, which is likely to happen at any age, or never, he learns to make a pile of his beloved failures and consign them to the flames, and never think of them again. But it ought to be a private bonfire."

It sounded like sense, particularly the part about not having to defend something if it was right enough to be its own defense. I said, "Thanks, Dad. I'll have to think. I don't know if I agree with you. . . . I'll tell you something, though. If Cordelia turned out to be nothing but a phonograph, I'd consider it a pleasure to spend the rest of my life buying new records for her."

"That'd be fine," said Dad, "if it was what you wanted. I seriously doubt that it is just now."

"Of course it isn't. Cordelia's all woman and has a wonderful mind, and that's what I want."

Theodore Sturgeon

"Bless you, my children," Dad said, and grinned.

I knew I was right, and that Dad was simply expressing a misguided caution. The Foxy Grandpa routine, I thought, was a sign of advancing age. Dad sure was changed since the old days. On the other hand, he hadn't been the same since the mysterious frittering-out of his mysterious down-cellar project. I stopped thinking about Dad, and turned my mind to my own troubles.

I had plenty of time to think; I couldn't get a Saturday date with her for two weeks, and I wanted this session to run until it was finished with no early curfews. Not, as I have said, that I had any doubts. Far from it. All the same, I made a little list. . . .

I don't think I said ten words to her until we were three blocks from her house. She quite took my breath away. She was wearing a green suit with surprising lapels that featured her fabulous profile and made me ache inside. I had not known that I was so hungry for a sight of her, and now she was more than a sight, now her warm hand had slipped into mine as we walked. "Cordelia . . ." I whispered.

She turned her face to me, and showed me the tender crinkles in the corners of her mouth. She made an interrogative sound, like a sleepy bird.

"Cordelia," I said thickly. It all came out in a monotone. "I didn't know I could miss anybody so much. There's been a hollow place in my eyes, wherever I looked; it had no color and it was shaped like you. Now you fill it and I can see again."

She dropped her eyes, and her smile was a thing to see. "You said that beautifully," she breathed.

I hadn't thought of that. What I had said was squeezed out of me like toothpaste out of a tube, with the same uniformity between what came out and what was still inside.

THE MARTIAN AND THE MORON

"We'll go to the Stroll Inn." I said. "It was where we met. We didn't meet at the party. We just saw each other there. We met in that booth."

She nodded gravely and walked with me, her face asleep, its attention turned inward, deeply engaged. It was not until we turned the corner on Winter Street and faced the Inn that I thought of my list; and when I did, I felt a double, sickening impact—first, one of shame that I should dare to examine and experiment with someone like this, second, because item five on that list was "You said that beautifully. . . ."

The Stroll Inn, as I indicated before, has all its lights, practically, on the outside. Cordelia looked at me thoughtfully as we walked into their neon field. "Are you all right?" she asked. "You look pale."

"How can you tell?" I asked, indicating the lights, which flickered and switched, orange and green and blue and red. She smiled appreciatively, and two voices spoke within me. One said joyfully, "'You look pale' is a declarative statement." The other said angrily, "You're hedging. And by the way, what do you suppose that subtle smile is covering up, if anything?" Both voices spoke forcefully, combining in a jumble which left me badly confused. We went in and found a booth and ordered dinner. Cordelia said with pleasure that she would have what I ordered.

Over the appetizer I said, disliking myself intensely, "Isn't this wonderful? All we need is a moon. Can't you see it, hanging up there over us?"

She laughed and looked up, and sad sensitivity came into her face. I closed my eyes, waiting.

"*Is the moon tired? she looks so pale—*" she began.

I started to chew again. I think it was marinated her-ring, and very good too, but at the moment it tasted like cold oatmeal with a dash of warm lard. I called the waiter

Theodore Sturgeon

and ordered a double rum and soda. As he turned away I called him back and asked him to bring a bottle instead. I needed help from somewhere, and pouring it out of a bottle seemed a fine idea at the time.

Over the soup I asked her what she was thinking about. "I was ruminating," she said in a self-deprecating, tragic voice, "on the futility of human endeavor." Oh, brother, me too, I thought. Me too.

Over the dessert we had converse again, the meat course having passed silently. We probably presented a lovely picture, the two of us wordlessly drinking in each other's presence, the girl radiating an understanding tenderness, the young man speechless with admiration. Look how he watches her, how his eyes travel over her face, how he sighs and shakes his head and looks back at his plate.

I looked across the Inn. In a plate-glass window a flashing neon sign said bluely, "nnl llortS. nnl llortS."

"Nni llorts," I murmured.

Cordelia looked up at me expectantly, with her questioning sound. I tensed. I filled the jigger with rum and poured two fingers into my empty highball glass. I took the jigger in one hand and the glass in the other.

I said, "You've read Kremlin von Schtunk, the Hungarian poet?" and drank the jigger.

"Well, really," she said pityingly.

"I was just thinking of his superb line 'Nni llorts, nov shmoz ka smörgasbord,'" I intoned, "which means—" and I drank the glass.

She reached across the table and touched my elbow. "Please. Don't translate. It couldn't be phrased as well in English."

Something within me curled up and died. Small, tight, cold and dense, its corpse settled under my breastbone. I could have raged at her, I supposed. I could have coldly

THE MARTIAN AND THE MORON

questioned her, pinned her down, stripped from her those layers of schooled conversational reactions, leaving her ignorance in nakedness. But what for? I didn't want it. . . . And I could have talked to her about honesty and ethics and human aims—why did she do it? What did she ever hope to get? Did she think she would ever corral a man and expect him to be blind, for the rest of his life, to the fact that there was nothing behind this false front—nothing at all? Did she think that—did she think? No.

I looked at her, the way she was smiling at me, the deep shifting currents which seemed to be in her eyes. She was a monster. She was some graceful diction backed by a bare half-dozen relays. She was a card-file. She was a bubble, thin-skinned, covered with swirling, puzzling, compelling colors, filled with nothing. I was hurt and angry and, I think, a little frightened. I drank some more rum. I ordered her a drink and then another, and stayed ahead of her four to one. I'd have walked out and gone home if I had been able to summon the strength. I couldn't. I could only sit and stare at her and bathe myself in agonized astonishment. She didn't mind. She sat listening as raptly to my silence as she had to my conversation. Once she said, "We're just *being* together, aren't we?" and I recognized it as another trick from the bag. I wondered idly how many she might come up with if I just waited.

She came up with plenty.

She sat up and leaned forward abruptly. I had the distinct feeling that she was staring at me—her face was positioned right for it—but her eyes were closed. I put my glass down and stared blearily back, thinking, now what?

Her lips parted, twitched, opened wide, pursed. They uttered a glottal gurgling which was most unpleasant. I pushed my chair back, startled. "Are you sick?"

"Are you terrestrial?" she asked me.

"Am I *what?*"

"Making—contact thirty years," she said. Her voice was halting, filled with effort.

"What are you talking about?"

"Terrestrial quickly power going," she said clearly. "Many—uh—much power making contact this way very high frequencies thought. Easy radio. Not again thought. Take radio code quickly."

"Listen, toots," I said nastily, "This old nose no longer has a ring in it. Go play tricks on somebody else." I drank some more rum. An I. Q. of sixty, and crazy besides. "You're a real find, you are," I said.

"Graphic," she said. "Uh—write. Write. Write." She began to claw the table cloth. I looked at her hand. It was making scribbling motions. "Write, write."

I flipped a menu over and put it in front of her and gave her my pen.

Now, I read an article once on automatic writing—you know, that spiritualist stuff. Before witnesses, a woman once wrote a long letter in trance in an unfamiliar (to her) hand, at the astonishing rate of four hundred and eight words a minute. Cordelia seemed to be out to break that record. That pen-nib was a blur. She was still leaning forward rigidly, and her eyes were still closed. But instead of a blurred scrawl, what took shape under her flying hand was a neat list or chart. There was an alphabet of sorts, although not arranged in the usual way; it was more a list of sounds. And there were the numbers one to fourteen. Beside each sound and each number was a cluster of regular dots which looked rather like Braille. The whole sheet took her not over forty-five seconds to do. And after she finished she didn't move anything except her eyelids, which went up. "I think," she said con-

THE MARTIAN AND THE MORON

versationally, "that I'd better get home, Henry. I feel a little dizzy."

I felt a little more than that. The rum, in rum's inevitable way, had sneaked up on me, and suddenly the room began to spin, diagonally, from the lower left to the upper right. I closed my eyes tight, opened them, fixed my gaze on a beertap on the bar at the end of the room, and held it still until the room slowed and stopped. "You're so right," I said, and did a press-up on the table top to assist my legs. I managed to help Cordelia on with her light coat. I put my pen back in my pocket (I found it the next morning with the cap still off and a fine color scheme in the lining of my jacket) and picked up the menu.

"What's that?" asked Cordelia.

"A souvenir," I said glumly. I had no picture, no school ring, no nothing. Only a doodle. I was too tired, twisted, and tanked to wonder much about it, or about the fact that she seemed never to have seen it before. I folded it in two and put it in my hip.

I got her home without leaning on her. I don't know if she was ready to give a repeat performance of that good-night routine. I didn't wait to find out. I took her to the door and patted her on the cheek and went away from there. It wasn't her fault. . . .

When I got to our house, I dropped my hat on the floor in the hall and went into the dark living room and fell into the easy-chair by the door. It was a comfortable chair. It was a comfortable room. I felt about as bad as I ever had. I remember wondering smokily whether anyone ever loves a person. People seem to love dreams instead, and for the lucky ones, the person is close to the dream. But it's a dream all the same, a sticky dream. You unload the person, and the dream stays with you.

What was it Dad had said? "When a fellow gets to be a big grown-up man . . . he learns to make a pile of his

Theodore Sturgeon

beloved failures and consign them to the flames." "Hah!" I ejaculated, and gagged. The rum tasted terrible. I had nothing to burn but memories and the lining of my stomach. The latter was flaming merrily. The former stayed where they were. The way she smiled, so deep and secret. . . .

Then I remembered the doodle. Her hands had touched it, her mind had— No, her mind hadn't. It could have been anyone's mind, but not hers. The girl operated under a great handicap. No brains. I felt terrible. I got up out of the chair and wove across the room, leaning on the mantel. I put my forehead on the arm which I had put on the mantel, and with my other hand worried the menu out of my pocket. With the one hand and my teeth I tore it into small pieces and dropped the pieces in the grate, all but one. Then I heaved myself upright, braced my shoulder against the mantel, which had suddenly begun to bob and weave, got hold of my lighter, coaxed a flame out of it and lit the piece I'd saved. It burned fine. I let it slip into the grate. It flickered, dimmed, caught on another piece of paper, flared up again. I went down on one knee and carefully fed all the little pieces to the flame. When it finally went out I stirred the ashes around with my finger, got up, wiped my hands on my pants, said, "That was good advice Dad gave me," and went back to the chair. I went back into it, pushed my shoes off my feet, curled my legs under me and, feeling much better, dozed off.

I woke slowly, some time later, with granulated eyelids and a mouth full of emory and quinine. My head was awake but my legs were asleep and my stomach had its little hands on my backbone and was trying to pull it out by the roots. I sat there groggily looking at the fire.

Fire? What fire? I blinked and winced; I could almost hear my eyelids rasping.

THE MARTIAN AND THE MORON

There was a fire in the grate. Dad was kneeling beside it, feeding it small pieces of paper. I didn't say anything; I don't think it occurred to me. I just watched.

He let the fire go out after a while; then he stirred the ashes with his finger and stood up with a sigh, wiping his hands on his pants. "Good advice I gave the boy. Time I took it myself." He loomed across the shadowy room to me, turned around and sat down in my lap. He was relaxed and heavy, but he didn't stay there long enough for me to feel it. "Gah!" he said, crossed the room again in one huge bound, put his back against the mantel and said, "Don't move, you. I've got a gun."

"It's me, Dad."

"Henry! Bythelordharry, you'll be the death of me yet. That was the most inconsiderate thing you have ever done in your entire selfish life. I've a notion to bend this poker over your Adam's apple, you snipe." He stamped over to the bookcase and turned on the light. "This is the last time I'll ever—Henry! What's the matter? You look awful! Are you all right?"

"I'll live," I said regretfully. "What were you burning?"

He grinned sheepishly. "A beloved failure. Remember my preachment a couple weeks ago? It got to working on me. I decided to take my own advice." He breathed deeply. "I feel much better, I think."

"I burned some stuff too," I croaked. "I feel better too, I think," I added.

"Cordelia?" he asked, sitting near me.

"She hasn't got brain one," I said.

"Well," he said. There was more sharing and comfort in the single syllable than in anything I have ever heard. I looked at him. He hadn't changed much over the years. A bit heavier. A bit grayer. Still intensely alive, though.

Theodore Sturgeon

And he'd learned to control those wild projects of his. I thought, quite objectively, "I like this man."

We were quiet for a warm while. Then, "Dad—what was it you burned? The Martian project?"

"Why, you young devil! How did you know?"

"I dunno. You look like I feel. Sort of—well, you've finally unloaded something, and it hurts to lose it, but you're glad you did."

"On the nose," he said, and grinned sheepishly. "Yup, Henry—I really hugged that project to me. Want to hear about it?"

Anything but Cordelia, I thought. "I saw your rig," I said, to break the ice. "The night you sent me out for the wire. You left the workshop open."

"I'll be darned. I thought I'd gotten away with it."

"Mother knew what you were up to, though she didn't know how."

"And you saw how."

"I saw that weird gimmick of yours, but it didn't mean anything to me, Mother told me never to mention it to you. She thought you'd be happier if you were left alone."

He laughed with real delight. "Bless her heart," he said. "She was a most understanding woman."

"I read about the Martian signals in the papers," I said. "Fellow named—what was it?"

"Jenkins," said Dad. "C. Francis Jenkins. He built a film-tape recorder to catch the signals. He tuned to six thousand meters and had a flashing light to record the signals. Primitive, but it worked. Dr. David Todd of Amherst was the man who organized the whole project, and got the big radio people all over the world to cooperate. They had a five-minute silence every hour during Mars' closest proximity—August 21 to 23."

THE MARTIAN AND THE MORON

"I remember," I said. "It was my birthday. 1924. What got you so teed-off?"

"I got mad," said my father, folding his hands over his stomach. "Just because it had become fashionable to use radio in a certain way on earth, those simple souls had to assume that the Martian signals—if any—would come through the same way. I felt that they'd be different."

"Why should they be?"

"Why should we expect Martians to be the same? Or even think the same? I just took a wild stab at it, that's all. I tuned in on six wave-lengths at the same time. I set up my rig so that anything coming through on any one wave-length would actuate a particular phone."

"I remember," I said, trying hard. "The iron filings on the paper tape, over the earphones."

"That's right. The phone was positioned far enough below the tape so that the magnetic field would barely contain the filings. When the diaphragm vibrated, the filings tended to cluster. I had six phones on six different wave-lengths, arranged like this," and he counted them out on the palm of his hand:

1	2
3	4
5	6

"What could you get? I don't figure it, Dad. There'd be no way of separating your dots and dashes."

"Blast!" he exploded. "That's the kind of thinking that made me mad, and makes me mad to this day! No, what I was after was something completely different in transmission. Look; how much would you get out of piano music if all the strings but one were broken? Only when the pianist hit that note in the course of his transmission would you hear anything. See what I mean? Supposing

Theodore Sturgeon

the Martians were sending in notes and chords of an established octave of frequencies? Sure—Jenkins got signals. No one's ever been able to interpret them. Well, supposing I was right—then Jenkins was recording only one of several or many 'notes' of the scale, and of course it was meaningless."

"Well, what did you get?"

"Forty-six photographs, five of which were so badly under-exposed that they were useless to me. I finally got the knack of moving the tape carefully enough and lighting it properly, and they came out pretty well. I got signals of four of the six frequencies. I got the same grouping only three of four times; I mean, sometimes there would be something on phones 1, 2, and 4, and sometimes it would only be on 4, and sometimes it would be on 2 and 6. Three and 5 never did come through; it was just fantastic luck that I picked the right frequencies, I suppose, for the other four."

"What frequencies did you use?"

He grinned. "I don't know. I really don't. It was all by guess and by golly. I never was an engineer, Henry. I'm in the insurance business. I had no instruments—particularly not in 1924. I wound a 6,000-meter coil according to specs they printed in the paper. As for the others, I worked on the knowledge that less turns of heavier wire means shorter wave-lengths. I haven't got the coils now and couldn't duplicate 'em in a million years. All I can say for sure is that they were all different, and stepped down from 6,000.

"Anyway, I studied those things until I was blue in the face. It must've been the better part of a year before I called in anyone else. I wrote to Mr. Jenkins and Dr. Todd too, but who am I? A taxidermical broker with a wacky idea. They sent the pictures back with polite letters, and I can't say I blame them . . . anyway, good

THE MARTIAN AND THE MORON

riddance to the things. But it was a wonderful idea, and I wanted so much to be the man who did the job. . . . Ever want something so badly you couldn't see straight, Henry?"

"Me?" I asked, with bitterness.

"It's all over now, though. I'm through with crazy projects, for life. Never again. But gosh, I did love that project. Know what I mean?"

"No," I said with even more bitterness.

He sat up straight. "Hey. I'm sorry, fellow. Those were rhetorical questions. Maybe you'd better spill it."

So I told it to him—all of it. Once I started, I couldn't stop. I told him about the moon poem and the "well, really" gimmick and the "please don't translate" routine, and the more I talked the worse I felt. He sat and listened, and didn't say "I told you so," and the idea was worming its way into the back of my mind as I talked that here sat one of the most understanding people ever created, when he screamed. He screamed as one screams at the intrusion of an ice-cube into the back of one's bathing suit.

"What's the matter?" I asked, breaking off.

"Go on, go on," he gabbled. "Henry, you idiot, don't tell me you don't know what you're saying for Pete's sake, boy, tell it to—"

"Whoa! I don't even remember where I was."

"What she said to you—'Are you a terrestrial?'"

"Oh, don't get so excited, Dad. It doesn't mean anything. Why bother? She was trying to interest me, I suppose. I didn't let it get to me then and I won't now. She—"

"*Blast* her! I'm not talking about her. It was what she said. Go on, Henry! You say she wrote something?"

He wormed it all out of me. He forced me to go over it and over it. The windows paled and the single light by

the bookcase looked yellow and ill in the dawn, but still he pounded at me. And I finally quit. I just quit, out of compounded exhaustion and stubbornness. I lay back in the big chair and glared at him.

He strode up and down the room, trying to beat his left hand to a pulp with a right fist. "Of course, of course," he said excitedly. "That's how they'd do it. The blankest mind in the world. Blank and sensitive, like undeveloped film. *Of course!* 'Making contact thirty years' they said. 'Much power making contact this way—very high frequencies thought.' A radionic means of transmitting thought, and it uses too much power to be practical. 'Easy radio. Not again thought.'"

He stopped in front of me, glaring. "'Not again thought,'" he growled. "You—you *dope!* How could my flesh and blood be so abjectly stupid? There in your hands you held the interplanetary Rosetta Stone, and what did you do with it?"

I glared back at him. "I was quote consigning one of my beloved failures to the flames end quote," I said nastily.

Suddenly he was slumped and tired. "So you were, son. So you were. And it was all there—like Braille, you said. A series of phonetic symbols, and almost certainly a list of the frequency-octave they use. And—and all my pictures. . . . I burned them too." He sat down.

"Henry—"

"Don't take it so hard, Dad," I said. "Your advice was good. You forget your Martians and I'll forget my moron. When a fellow gets to be a grown-up man—"

He didn't hear me. "Henry. You say her folks like you?"

I sprang to my feet. "NO!" I bellowed. "Dad, I will not, repeat, *not* under any circumstances woo that beautiful package of brainless reflexes. I have had mine. I—"

THE MARTIAN AND THE MORON

"You really mean it, don't you?"

"That I do," I said positively.

"Well," he said dejectedly, "I guess that's that."

And then that old, old fever came back into his face.

"Dad—"

He slowly straightened up, that hot "Land ho!" expression in his eyes. My father is hale, handsome, and when he wants to be, extremely persistent.

"Now, Dad," I said. "Let's be reasonable. She's very young, Dad. Now, let's talk this thing over a little more, Dad. You can't go following a girl all over the house with a notebook and pencil. They said they wouldn't use the thought contact again, Dad. Now Dad—"

"Your mother would understand if she were alive," he murmured.

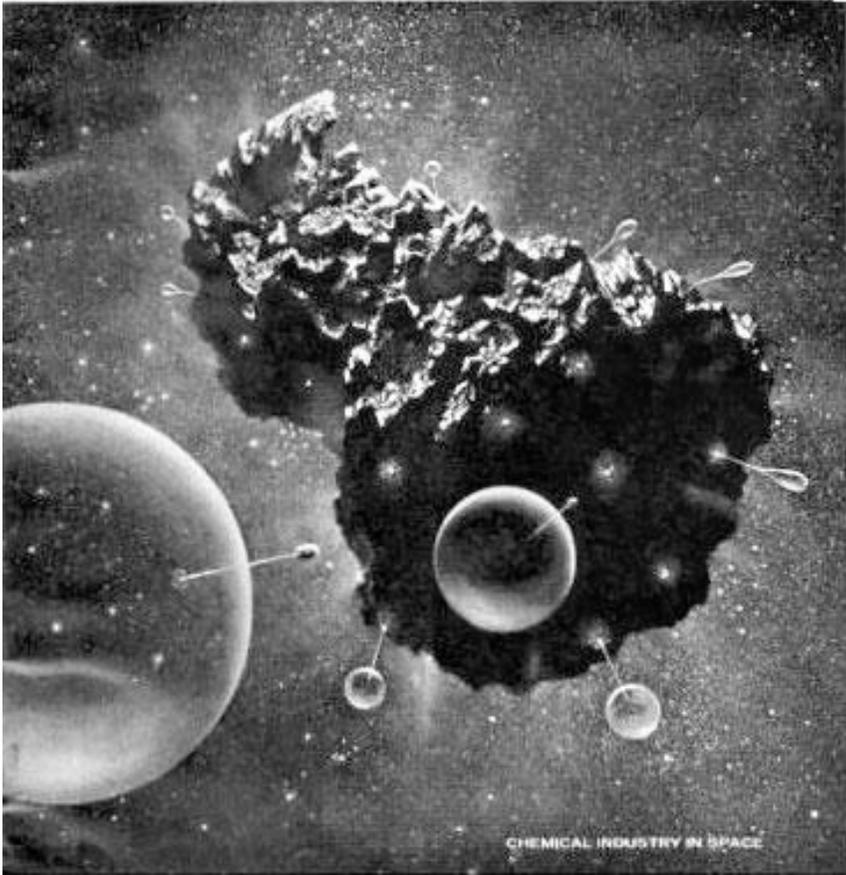
"No! You can't!" I bawled. "Dad, for heaven's sake use your head! Why you—Cordelia—Dad, she'd make me call her *Mummy!*"

Now what am I going to do?

SEPTEMBER 50 CENTS

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SCIENCE FACT + SCIENCE FICTION



INDUSTRIAL REVOLUTION | BY WINSTON P. SANDERS

Story Illustrations by Leo Summers

Poul Anderson was born in 1926 in Bristol, Pennsylvania and raised in Texas until his father, an engineer, died. His parents were Scandinavian, and when her husband died she moved what was left of her family to Denmark.

When WWII broke out they moved back to the United States, in a Minnesota farmhouse.

He sold his first stories to *Astounding Science Fiction* while studying physics at the University of Minnesota. Rather than becoming employed as a physicist after his graduation, he concentrated on writing.

He died at age seventy five on July 31, 2001 from cancer.

He won over thirty major science fiction awards, including seven Hugos and three Nebulas. He wrote over 70 novels and many, many short stories in his writing career.

Arthur C. Clarke mentioned that Anderson “handled every conceivable theme in the genre of science fiction, and Anderson’s tales had the knack for pairing up unusual characters and premises to generate unique and often highly amusing adventures.”

When assembling this book I looked for stories by my favorite authors, and tried to find stories I hadn’t read yet. This next story, written under the pen name Winston P. Sanders, was one that made me very glad I’d made that decision.



Industrial Revolution

Poul Anderson

“Well, yes,” Amspaugh admitted, “it was a unique war in many ways, including its origin. However, there are so many analogies to other colonial revolutions—” His words trailed off as usual.

“I know. Earth’s mercantile policies and so forth,” said Lindgren. He fancies himself a student of interplanetary history. This has led to quite a few arguments since Amspaugh, who teaches in that field, joined the Club. Mostly they’re good. I went to the bar and got myself another drink, listening as the mine owner’s big voice went on:

“But what began it? When did the asterites first start realizing they weren’t pseudopods of a dozen Terrestrial nations, but a single nation in their own right? There’s the root of the revolution. And it can be pinned down, too.”

“Ware metaphor!” cried someone at my elbow. I turned and saw Missy Blades. She’d come quietly into the lounge and started mixing a gin and bitters.

The view window framed her white head in Orion as she moved toward the little cluster of seated men. She took a fat cigar from her pocket, struck it on her shoe sole, and added her special contribution to the blue cloud in the room after she sat down.

“Excuse me,” she said. “I couldn’t help that. Please go on.” Which I hope relieves you of any fear that she’s an Unforgettable Character. Oh, yes, she’s old as Satan now; her toil and guts and conniving make up half the biography of the Sword; she manned a gun turret at Ceres, and was mate of the *Tyrfin* on some of the earliest Saturn runs when men took their lives between their teeth because they needed both hands free; her sons and grandsons fill the Belt with their brawling ventures;

she can drink any ordinary man to the deck; she's one of the three women ever admitted to the Club. But she's also one of the few genuine ladies I've known in my life.

"Uh, well," Lindgren grinned at her. "I was saying, Missy, the germ of the revolution was when the Stations armed themselves. You see, that meant more than police powers. It implied a degree of sovereignty. Over the years, the implication grew."

"Correct." Orloff nodded his bald head. "I remember how the Governing Commission squalled when the Station managers first demanded the right. They foresaw trouble. But if the Stations belonging to one country put in space weapons, what else could the others do?"

"They should have stuck together and all been firm about refusing to allow it," Amspaugh said. "From the standpoint of their own best interests, I mean."

"They tried to," Orloff replied. "I hate to think how many communications we sent home from our own office, and the others must have done the same. But Earth was a long way off. The Station bosses were close. Inverse square law of political pressure."

"I grant you, arming each new little settlement proved important," Amspaugh said. "But really, it expressed nothing more than the first inchoate stirrings of asteroid nationalism. And the origins of that are much more subtle and complex. For instance ... er...."

"You've got to have a key event somewhere," Lindgren insisted. "I say that this was it."

A silence fell, as will happen in conversation. I came back from the bar and settled myself beside Missy. She looked for a while into her drink, and then out to the stars. The slow spin of our rock had now brought the Dippers into view. Her faded eyes sought the Pole Star—but it's Earth's, not our own any more—and I wondered what memories they were sharing. She shook herself the least bit and said:

"I don't know about the sociological ins and outs. All I

know is, a lot of things happened, and there wasn't any pattern to them at the time. We just slogged through as best we were able, which wasn't really very good. But I can identify one of those wriggling roots for you, Sigurd. I was there when the question of arming the Stations first came up. Or, rather, when the incident occurred that led directly to the question being raised."

Our whole attention went to her. She didn't dwell on the past as often as we would have liked.

A slow, private smile crossed her lips. She looked beyond us again. "As a matter of fact," she murmured, "I got my husband out of it." Then quickly, as if to keep from remembering too much:

"Do you care to hear the story? It was when the Sword was just getting started. They'd established themselves on SSC 45—oh, never mind the catalogue number. Sword Enterprises, because Mike Blades' name suggested it—what kind of name could you get out of Jimmy Chung, even if he was the senior partner? It'd sound too much like a collision with a meteorite—so naturally the asteroid also came to be called the Sword. They began on the borrowed shoestring that was usual in those days. Of course, in the Belt a shoestring has to be mighty long, and finances got stretched to the limit. The older men here will know how much had to be done by hand, in mortal danger, because machines were too expensive. But in spite of everything, they succeeded. The Station was functional and they were ready to



start business when—”

It was no coincidence that the Jupiter craft were arriving steadily when the battleship came. Construction had been scheduled with this in mind, that the Sword should be approaching conjunction with the king planet, making direct shuttle service feasible, just as the chemical plant went into service. We need not consider how much struggle and heart-break had gone into meeting that schedule. As for the battleship, she appeared because the fact that a Station in just this orbit was about to commence operations was news important enough to cross the Solar System and push through many strata of bureaucracy. The heads of the recently elected North American government became suddenly, fully aware of what had been going on.

Michael Blades was outside, overseeing the installation of a receptor, when his earplug buzzed. He thrust his chin against the tuning plate, switching from gang to interoffice band. “Mike?” said Avis Page’s voice, “You’re wanted up front.”

“Now?” he objected. “Whatever for?”

“Courtesy visit from the NASS *Altair*. You’ve lost track of time, my boy.”

“What the ... the jumping blue blazes are you talking about? We’ve had our courtesy visit. Jimmy and I both went over to pay our respects, and we had Rear Admiral Hulse here to dinner. What more do they expect, for Harry’s sake?”

“Don’t you remember? Since there wasn’t room to entertain his officers, you promised to take them on a personal guided tour later. I made the appointment the very next watch. Now’s the hour.”

“Oh, yes, it comes back to me. Yeah. Hulse brought a magnum of champagne with him, and after so long a time drinking recycled water, my capacity was shot to pieces. I got a warm glow of good fellowship on, and offered—Let Jimmy handle it, I’m busy.”

“The party’s too large, he says. You’ll have to take half

of them. Their gig will dock in thirty minutes.”

“Well, depute somebody else.”

“That’d be rude, Mike. Have you forgotten how sensitive they are about rank at home?” Avis hesitated. “If what I believe about the mood back there is true, we can use the good will of high-level Navy personnel. And any other influential people in sight.”

Blades drew a deep breath. “You’re too blinking sensible. Remind me to fire you after I’ve made my first ten million bucks.”

“What’ll you do for your next ten million, then?” snipped his secretary-file clerk-confidante-adviser-et cetera.

“Nothing. I’ll just squander the first.”

“Goody! Can I help?”

“Uh ... I’ll be right along.” Blades switched off. His ears felt hot, as often of late when he tangled with Avis, and he unlimbered only a few choice oaths.

“Troubles?” asked Carlos Odonaju.

Blades stood a moment, looking around, before he answered. He was on the wide end of the Sword, which was shaped roughly like a truncated pyramid. Beyond him and his half dozen men stretched a vista of pitted rock, jutting crags, gulf-black shadows, under the glare of floodlamps. A few kilometers away, the farthest horizon ended, chopped off like a cliff. Beyond lay the stars, crowding that night which never ends. It grew very still while the gang waited for his word. He could listen to his own lungs and pulse, loud in the spacesuit; he could even notice its interior smell, blend of plastic and oxygen cycle chemicals, flesh and sweat. He was used to the sensation of hanging upside down on the surface, grip-soled boots holding him against that fractional gee by which the asteroid’s rotation overcame its feeble gravity. But it came to him that this was an eerie bat-fashion way for an Oregon farm boy to stand.

Oregon was long behind him, though, not only the food factory where he grew up but the coasts where he had fished

and the woods where he had tramped. No loss. There'd always been too many tourists. You couldn't escape from people on Earth. Cold and vacuum and raw rock and everything, the Belt was better. It annoyed him to be interrupted here.

Could Carlos take over as foreman? N-no, Blades decided, not yet. A gas receptor was an intricate piece of equipment. Carlos was a good man of his hands. Every one of the hundred-odd in the Station necessarily was. But he hadn't done this kind of work often enough.

"I have to quit," Blades said. "Secure the stuff and report back to Buck Meyers over at the dock, the lot of you. His crew's putting in another recoil pier, as I suppose you know. They'll find jobs for you. I'll see you here again on your next watch."

He waved—being half the nominal ownership of this place didn't justify snobbery, when everyone must work together or die—and stepped off toward the nearest entry lock with that flowing spaceman's pace which always keeps one foot on the ground. Even so, he didn't unshackle his inward-reeling lifeline till he was inside the chamber.

On the way he topped a gaunt ridge and had a clear view of the balloons that were attached to the completed receptors. Those that were still full bulked enormous, like ghostly moons. The Jovian gases that strained their tough elastomer did not much blur the stars seen through them; but they swelled high enough to catch the light of the hidden sun and shimmer with it. The nearly discharged balloons hung thin, straining outward. Two full ones passed in slow orbit against the constellations. They were waiting to be hauled in and coupled fast, to release their loads into the Station's hungry chemical plant. But there were not yet enough facilities to handle them at once—and the *Pallas Castle* would soon be arriving with another—Blades found that he needed a few extra curses.

Having cycled through the air lock, he removed his suit and stowed it, also the heavy gloves which kept him from frostbite as he touched its space-cold exterior. Tastefully clad

in a Navy surplus Long John, he started down the corridors.

Now that the first stage of burrowing within the asteroid had been completed, most passages went through its body, rather than being plastic tubes snaking across the surface. Nothing had been done thus far about facing them. They were merely shafts, two meters square, lined with doorways, ventilator grilles, and fluoropanel. They had no thermocoils. Once the nickel-iron mass had been sufficiently warmed up, the waste heat of man and his industry kept it that way. The dark, chipped-out tunnels throbbed with machine noises. Here and there a girlie picture or a sentimental landscape from Earth was posted. Men moved busily along them, bearing tools, instruments, supplies. They were from numerous countries, those men, though mostly North Americans, but they had acquired a likeness, a rangy leathery look and a free-swinging stride, that went beyond their colorful coveralls.

“Hi, Mike.... How’s she spinning?... Hey, Mike, you heard the latest story about the Martian and the bishop?... Can you spare me a minute? We got troubles in the separator manifolds.... What’s the hurry, Mike, your batteries overcharged?” Blades waved the hails aside. There was need for haste. You could move fast indoors, under the low weight which became lower as you approached the axis of rotation, with no fear of tumbling off. But it was several kilometers from the gas receptor end to the people end of the asteroid.

He rattled down a ladder and entered his cramped office out of breath. Avis Page looked up from her desk and wrinkled her freckled snub nose at him. “You ought to take a shower, but there isn’t time,” she said. “Here, use my antistinker.” She threw him a spray cartridge with a deft motion. “I got your suit and beardex out of your cabin.”

“Have I no privacy?” he grumbled, but grinned in her direction. She wasn’t much to look at—not ugly, just small, brunette, and unspectacular—but she was a supernova of an assistant. Make somebody a good wife some day. He wondered why she hadn’t taken advantage of the situation here to snaffle

a husband. A dozen women, all but two of them married, and a hundred men, was a ratio even more lopsided than the norm in the Belt. Of course with so much work to do, and with everybody conscious of the need to maintain cordial relations, sex didn't get much chance to rear its lovely head. Still—

She smiled back with the gentleness that he found disturbing when he noticed it. "Shoo," she said. "Your guests will be here any minute. You're to meet them in Jimmy's office."

Blades ducked into the tiny washroom. He wasn't any 3V star himself, he decided as he smeared cream over his face: big, homely, red-haired. *But not something you'd be scared to meet in a dark alley, either*, he added smugly. In fact, there had been an alley in Aresopolis.... Things were expected to be going so smoothly by the time they approached conjunction with Mars that he could run over to that sinful ginful city for a vacation. Long overdue ... whoeee! He wiped off his whiskers, shucked the zipskin, and climbed into the white pants and high-colored blue tunic that must serve as formal garb.

Emerging, he stopped again at Avis' desk. "Any message from the *Pallas*?" he asked.

"No," the girl said. "But she ought to be here in another two watches, right on sked. You worry too much, Mike."

"Somebody has to, and I haven't got Jimmy's Buddhist ride-with-the-punches attitude."

"You should cultivate it." She grew curious. The brown eyes lingered on him. "Worry's contagious. You make me fret about you."

"Nothing's going to give me an ulcer but the shortage of booze on this rock. Uh, if Bill Mbolo should call about those catalysts while I'm gone, tell him—" He ran off a string of instructions and headed for the door.

Chung's hangout was halfway around the asteroid, so that one chief or the other could be a little nearer the scene of any emergency. Not that they spent much time at their desks. Shorthanded and undermechanized, they were forever having to help out in the actual construction. Once in a while Blades

found himself harking wistfully back to his days as an engineer with Solar Metals: good pay, interesting if hazardous work on flying mountains where men had never trod before, and no further responsibilities. But most asterites had the dream of becoming their own bosses.

When he arrived, the *Altair* officers were already there, a score of correct young men in white dress uniforms. Short, squat, and placid looking, Jimmy Chung stood making polite conversation. "Ah, there," he said, "Lieutenant Ziska and gentlemen, my partner, Michael Blades, Mike, may I present—"

Blades' attention stopped at Lieutenant Ziska. He heard vaguely that she was the head quartermaster officer. But mainly she was tall and blond and blue-eyed, with a bewitching dimple when she smiled, and filled her gown the way a Cellini Venus doubtless filled its casting mold.

"Very pleased to meet you, Mr. Blades," she said as if she meant it. Maybe she did! He gulped for air.

"And Commander Leibknecht," Chung said across several light-years. "Commander Leibknecht. *Commander Leibknecht.*"

"Oh. Sure. 'Scuse." Blades dropped Lieutenant Ziska's hand in reluctant haste. "Hardjado, C'mander Leibfraumilch."

Somehow the introductions were gotten through. "I'm sorry we have to be so inhospitable," Chung said, "but you'll see how crowded we are. About all we can do is show you around, if you're interested."

"Of course you're interested," said Blades to Lieutenant Ziska. "I'll show you some gimmicks I thought up myself."

Chung scowled at him. "We'd best divide the party and proceed along alternate routes," he said, "We'll meet again in the mess for coffee, Lieutenant Ziska, would you like to—"

"Come with me? Certainly," Blades said.

Chung's glance became downright murderous. "I thought—" he began.

"Sure." Blades nodded vigorously. "You being the senior partner, you'll take the highest ranking of these gentle-

men, and I'll be in Scotland before you. C'mon, let's get started. May I?" He offered the quartermistress his arm. She smiled and took it. He supposed that eight or ten of her fellows trailed them.

The first disturbing note was sounded on the verandah.

They had glanced at the cavelike dormitories where most of the personnel lived; at the recreation dome topside which made the life tolerable; at kitchen, sick bay, and the other service facilities; at the hydroponic tanks and yeast vats which supplied much of the Station's food; at the tiny cabins scooped out for the top engineers and the married couples. Before leaving this end of the asteroid, Blades took his group to the verandah. It was a clear dome jutting from the surface, softly lighted, furnished as a primitive officers' lounge, open to a view of half the sky.

"Oh-h," murmured Ellen Ziska. Unconsciously she moved closer to Blades.

Young Lieutenant Commander Gilbertson gave her a somewhat jaundiced look. "You've seen deep space often enough before," he said.

"Through a port or a helmet." Her eyes glimmered enormous in the dusk. "Never like this."

The stars crowded close in their wintry myriads. The galactic belt glistened, diamond against infinite darkness. Vision toppled endlessly outward, toward the far mysterious shimmer of the Andromeda Nebula; silence was not a mere absence of noise, but a majestic presence, the seething of suns.

"What about the observation terrace at Leyburg?" Gilbertson challenged.

"That was different," Ellen Ziska said. "Everything was safe and civilized. This is like being on the edge of creation."

Blades could see why Goddard House had so long resisted the inclusion of female officers on ships of the line, despite political pressure at home and the Russian example abroad. He was glad they'd finally given in. Now if only he could build himself up as a dashing, romantic type ... But how long would

the *Altair* stay? Her stopover seemed quite extended already, for a casual visit in the course of a routine patrol cruise. He'd have to work fast.

"Yes, we are pretty isolated," he said. "The Jupiter ships just unload their balloons, pick up the empties, and head right back for another cargo."

"I don't understand how you can find an industry here, when your raw materials only arrive at conjunction," Ellen said.

"Things will be different once we're in full operation," Blades assured her. "Then we'll be doing enough business to pay for a steady input, transshipped from whatever depot is nearest Jupiter at any given time."

"You've actually built this simply to process ... gas?" Gilbertson interposed. Blades didn't know whether he was being sarcastic or asking a genuine question. It was astonishing how ignorant Earthsiders, even space-traveling Earthsiders, often were about such matters.

"Jovian gas is rich stuff," he explained. "Chiefly hydrogen and helium, of course; but the scoopships separate out most of that during a pickup. The rest is ammonia, water, methane, a dozen important organics, including some of the damn ... doggonedest metallic complexes you ever heard of. We need them as the basis of a chemosynthetic industry, which we need for survival, which we need if we're to get the minerals that were the reason for colonizing the Belt in the first place." He waved his hand at the sky. "When we really get going, we'll attract settlement. This asteroid has companions, waiting for people to come and mine them. Homeships and orbital stations will be built. In ten years there'll be quite a little city clustered around the Sword."

"It's happened before," nodded tight-faced Commander Warburton of Gunnery Control.

"It's going to happen a lot oftener," Blades said enthusiastically. "The Belt's going to grow!" He aimed his words at Ellen. "This is the real frontier. The planets will never amount

to much. It's actually harder to maintain human-type conditions on so big a mass, with a useless atmosphere around you, than on a lump in space like this. And the gravity wells are so deep. Even given nuclear power, the energy cost of really exploiting a planet is prohibitive. Besides which, the choice minerals are buried under kilometers of rock. On a metallic asteroid, you can find almost everything you want directly under your feet. No limit to what you can do."

"But your own energy expenditure—" Gilbertson objected.

"That's no problem." As if on cue, the worldlet's spin brought the sun into sight. Tiny but intolerably brilliant, it flooded the dome with harsh radiance. Blades lowered the blinds on that side. He pointed in the opposite direction, toward several sparks of equal brightness that had manifested themselves.

"Hundred-meter parabolic mirrors," he said. "Easy to make; you spray a thin metallic coat on a plastic backing. They're in orbit around us, each with a small geegee unit to control drift and keep it aimed directly at the sun. The focused radiation charges heavy-duty accumulators, which we then collect and use for our power source in all our mobile work."

"Do you mean you haven't any nuclear generator?" asked Warburton.

He seemed curiously intent about it. Blades wondered why, but nodded. "That's correct. We don't want one. Too dangerous for us. Nor is it necessary. Even at this distance from the sun, and allowing for assorted inefficiencies, a mirror supplies better than five hundred kilowatts, twenty-four hours a day, year after year, absolutely free."

"Hm-m-m. Yes." Warburton's lean head turned slowly about, to rake Blades with a look of calculation. "I understand that's the normal power system in Stations of this type. But we didn't know if it was used in your case, too."

Why should you care? Blades thought.

He shoved aside his faint unease and urged Ellen toward

the dome railing. "Maybe we can spot your ship, Lieutenant, uh, Miss Ziska. Here's a telescope. Let me see, her orbit ought to run about so...."

He hunted until the *Altair* swam into the viewfield. At this distance the spheroid looked like a tiny crescent moon, dully painted; but he could make out the sinister shapes of a rifle turret and a couple of missile launchers. "Have a look," he invited. Her hair tickled his nose, brushing past him. It had a delightful sunny odor.

"How small she seems," the girl said, with the same note of wonder as before. "And how huge when you're aboard."

Big, all right, Blades knew, and loaded to the hatches with nuclear hellfire. But not massive. A civilian spaceship carried meteor plating, but since that was about as useful as wet cardboard against modern weapons, warcraft sacrificed it for the sake of mobility. The self-sealing hull was thin magnesium, the outer shell periodically renewed as cosmic sand eroded it.

"I'm not surprised we orbited, instead of docking," Ellen remarked. "We'd have butted against your radar and belied into your control tower."

"Well, actually, no," said Blades. "Even half finished, our dock's big enough to accommodate you, as you'll see today. Don't forget, we anticipate a lot of traffic in the future. I'm puzzled why you didn't accept our invitation to use it."

"Doctrine!" Warburton clipped.

The sun came past the blind and touched the officers' faces with incandescence. Did some look startled, one or two open their mouths as if to protest and then snap them shut again at a warning look? Blades' spine tingled. *I never heard of any such doctrine*, he thought, *least of all when a North American ship drops in on a North American Station.*

"Is ... er ... is there some international crisis brewing?" he inquired.

"Why, no." Ellen straightened from the telescope. "I'd say relations have seldom been as good as they are now. What

makes you ask?"

"Well, the reason your captain didn't—"

"Never mind," Warburton said. "We'd better continue the tour, if you please."

Blades filed his misgivings for later reference. He might have fretted immediately, but Ellen Ziska's presence forbade that. A sort of Pauli exclusion principle. One can't have two spins simultaneously, can one? He gave her his arm again. "Let's go on to Central Control," he proposed. "That's right behind the people section."

"You know, I can't get over it," she told him softly. "This miracle you've wrought. I've never been more proud of being human."

"Is this your first long space trip?"

"Yes, I was stationed at Port Colorado before the new Administration reshuffled armed service assignments."

"They did? How come?"

"I don't know. Well, that is, during the election campaign the Social Justice Party did talk a lot about old-line officers who were too hidebound to carry out modern policies effectively. But it sounded rather silly to me."

Warburton compressed his lips. "I do not believe it is proper for service officers to discuss political issues publicly," he said like a machine gun.

Ellen flushed. "S-sorry, commander."

Blades felt a helpless anger on her account. He wasn't sure why. What was she to him? He'd probably never see her again. A hell of an attractive target, to be sure; and after so much celibacy he was highly vulnerable; but did she really matter?

He turned his back on Warburton and his eyes on her—a five thousand per cent improvement—and diverted her from her embarrassment by asking, "Are you from Colorado, then, Miss Ziska?"

"Oh, no. Toronto."

"How'd you happen to join the Navy, if I may make so

bold?"

"Gosh, that's hard to say. But I guess mostly I felt so crowded at home. So, pigeonholed. The world seemed to be nothing but neat little pigeonholes."

"Uh-huh. Same here. I was also a square pigeon in a round hole." She laughed. "Luckily," he added, "Space is too big for compartments."

Her agreement lacked vigor. The Navy must have been a disappointment to her. But she couldn't very well say so in front of her shipmates.

Hm-m-m ... if she could be gotten away from them—"How long will you be here?" he inquired. His pulse thut-tered.

"We haven't been told," she said.

"Some work must be done on the missile launchers," Warburton said. "That's best carried out here, where extra facilities are available if we need them. Not that I expect we will." He paused. "I hope we won't interfere with your own operations."

"Far from it." Blades beamed at Ellen. "Or, more accurately, this kind of interference I don't mind in the least."

She blushed and her eyelids fluttered. Not that she was a fluffhead, he realized. But to avoid incidents, Navy regulations enforced an inhuman correctness between personnel of opposite sexes. After weeks in the black, meeting a man who could pay a compliment without risking court-martial must be like a shot of adrenalin. Better and better!

"Are you sure?" Warburton persisted. "For instance, won't we be in the way when the next ship comes from Jupiter?"

"She'll approach the opposite end of the asteroid," Blades said. "Won't stay long, either."

"How long?"

"One watch, so the crew can relax a bit among those of us who're off duty. It'd be a trifle longer if we didn't happen to have an empty bag at the moment. But never very long. Even

running under thrust the whole distance, Jupe's a good ways off. They've no time to waste."

"When is the next ship due?"

"The *Pallas Castle* is expected in the second watch from now."

"Second watch. I see." Warburton stalked on with a brooding expression on his Puritan face.

Blades might have speculated about that, but someone asked him why the Station depended on spin for weight. Why not put in an internal field generator, like a ship? Blades explained patiently that an Emmet large enough to produce uniform pull through a volume as big as the *Sword* was rather expensive. "Eventually, when we're a few megabucks ahead of the game—"

"Do you really expect to become rich?" Ellen asked. Her tone was awed. No Earthsider had that chance any more, except for the great corporations. "*Individually* rich?"

"We can't fail to. I tell you, this is a frontier like nothing since the Conquistadores. We could very easily have been wiped out in the first couple of years—financially or physically—by any of a thousand accidents. But now we're too far along for that. We've got it made, Jimmy and I."

"What will you do with your wealth?"

"Live like an old-time sultan," Blades grinned. Then, because it was true as well as because he wanted to shine in her eyes: "Mostly, though, we'll go on to new things. There's so much that needs to be done. Not simply more asteroid mines. We need farms; timber; parks; passenger and cargo liners; every sort of machine. I'd like to try getting at some of that water frozen in the Saturnian System. Altogether, I see no end to the jobs. It's no good our depending on Earth for anything. Too expensive, too chancy. The Belt has to be made completely self-sufficient."

"With a nice rakeoff for *Sword Enterprises*," Gilbertson scoffed.

"Why, sure. Aren't we entitled to some return?"

“Yes. But not so out of proportion as the Belt companies seem to expect. They’re only using natural resources that rightly belong to the people, and the accumulated skills and wealth of an entire society.”

“Huh! The People didn’t do anything with the Sword. Jimmy and I and our boys did. No Society was around here grubbing nickel-iron and riding out gravel storms; we were.”

“Let’s leave politics alone,” Warburton snapped. But it was mostly Ellen’s look of distress which shut Blades up.

To everybody’s relief, they reached Central Control about then. It was a complex of domes and rooms, crammed with more equipment than Blades could put a name to. Computers were in Chung’s line, not his. He wasn’t able to answer all of Warburton’s disconcertingly sharp questions.

But in a general way he could. Whirling through vacuum with a load of frail humans and intricate artifacts, the Sword must be at once machine, ecology, and unified organism. Everything had to mesh. A failure in the thermodynamic balance, a miscalculation in supply inventory, a few mirrors perturbed out of proper orbit, might spell Ragnarok. The chemical plant’s purifications and syntheses were already a network too large for the human mind to grasp as a whole, and it was still growing. Even where men could have taken charge, automation was cheaper, more reliable, less risky of lives. The computer system housed in Central Control was not only the brain, but the nerves and heart of the Sword.

“Entirely cryotronic, eh?” Warburton commented. “That seems to be the usual practice at the Stations. Why?”

“The least expensive type for us,” Blades answered. “There’s no problem in maintaining liquid helium here.”

Warburton’s gaze was peculiarly intense. “Cryotronic systems are vulnerable to magnetic and radiation disturbances.”

“Uh-huh. That’s one reason we don’t have a nuclear power plant. This far from the sun, we don’t get enough emission to worry about. The asteroid’s mass screens out what little

may arrive. I know the TIMM system is used on ships; but if nothing else, the initial cost is more than we want to pay.”

“What’s TIMM?” inquired the *Altair*’s chaplain.

“Thermally Integrated Micro-Miniaturized,” Ellen said crisply. “Essentially, ultraminiaturized ceramic-to-metal-seal vacuum tubes running off thermionic generators. They’re immune to gamma ray and magnetic pulses, easily shielded against particule radiation, and economical of power.” She grinned. “Don’t tell me there’s nothing about them in Leviticus, Padre!”

“Very fine for a ship’s autopilot,” Blades agreed. “But as I said, we needn’t worry about rad or mag units here, we don’t mind sprawling a bit, and as for thermal efficiency, we want to waste some heat. It goes to maintain internal temperature.”

“In other words, efficiency depends on what you need to effish,” Ellen bantered. She grew grave once more and studied him for a while before she mused, “The same person who swung a pick, a couple of years ago, now deals with something as marvelous as this....” He forgot about worrying.

But he remembered later, when the gig had left and Chung called him to his office. Avis came too, by request. As she entered, she asked why.

“You were visiting your folks Earthside last year,” Chung said. “Nobody else in the Station has been back as recently as that.”

“What can I tell you?”

“I’m not sure. Background, perhaps. The feel of the place. We don’t really know, out in the Belt, what’s going on there. The beamcast news is hardly a trickle. Besides, you have more common sense in your left little toe than that big mick yonder has on his entire copperplated head.”

They seated themselves in the cobwebby low-gee chairs around Chung’s desk. Blades took out his pipe and filled the bowl with his tobacco ration for today. Wouldn’t it be great, he thought dreamily, if this old briar turned out to be an Aladdin’s lamp, and the smoke condensed into a blonde she-Canadian

—?

“Wake up, will you?” Chung barked.

“Huh?” Blades started. “Oh. Sure. What’s the matter? You look like a fish on Friday.”

“Maybe with reason. Did you notice anything unusual with that party you were escorting?”

“Yes, indeed.”

“What?”

“About one hundred seventy-five centimeters tall, yellow hair, blue eyes, and some of the smoothest fourth-order curves I ever—”

“Mike, stop that!” Avis sounded appalled. “This is serious.”

“I agree. She’ll be leaving in a few more watches.”

The girl bit her lip. “You’re too old for that mooncalf rot and you know it.”

“Agreed again. I feel more like a bull.” Blades made pawing motions on the desktop.

“There’s a lady present,” Chung said.

Blades saw that Avis had gone quite pale. “I’m sorry,” he blurted. “I never thought ... I mean, you’ve always seemed like—”

“One of the boys,” she finished for him in a brittle tone. “Sure. Forget it. What’s the problem, Jimmy?”

Chung folded his hands and stared at them. “I can’t quite define that,” he answered, word by careful word. “Perhaps I’ve simply gone spacedizzy. But when we called on Admiral Hulse, and later when he called on us, didn’t you get the impression of, well, wariness? Didn’t he seem to be watching and probing, every minute we were together?”

“I wouldn’t call him a cheerful sort,” Blades nodded. “Stiff as molasses on Pluto. But I suppose ... supposed he’s just naturally that way.”

Chung shook his head. “It wasn’t a normal standoffishness. You’ve heard me reminisce about the time I was on Vesta with the North American technical representative, when the

Convention was negotiated.”

“Yes, I’ve heard that story a few times,” said Avis dryly.

“Remember, that was right after the Europa Incident. We’d come close to a space war—undeclared, but it would have been nasty. We were still close. Every delegate went to that conference cocked and primed.

“Hulse had the same manner.”

A silence fell. Blades said at length, “Well, come to think of it, he did ask some rather odd questions. He seemed to twist the conversation now and then, so he could find things out like our exact layout, emergency doctrine, and so forth. It didn’t strike me as significant, though.”

“Nor me,” Chung admitted. “Taken in isolation, it meant nothing. But these visitors today—Sure, most of them obviously didn’t suspect anything untoward. But that Liebknecht, now. Why was he so interested in Central Control? Nothing new or secret there. Yet he kept asking for details like the shielding factor of the walls.”

“So did Commander Warburton,” Blades remembered. “Also, he wanted to know exactly when the *Pallas* is due, how long she’ll stay ... hm-m-m, yes, whether we have any radio linkage with the outside, like to Ceres or even the nearest Commission base—”

“Did you tell him that we don’t?” Avis asked sharply.

“Yes. Shouldn’t I have?”

“It scarcely makes any difference,” Chung said in a resigned voice. “As thoroughly as they went over the ground, they’d have seen what we do and do not have installed so far.”

He leaned forward. “Why are they hanging around?” he asked. “I was handed some story about overhauling the missile system.”

“Me, too,” Blades said.

“But you don’t consider a job complete till it’s been tested. And you don’t fire a test shot, even a dummy, this close to a Station. Besides, what could have gone wrong? I can’t see a ship departing Earth orbit for a long cruise without everything

being in order. And they didn't mention any meteorites, any kind of trouble, en route. Furthermore, why do the work here? The Navy yard's at Ceres. We can't spare them any decent amount of materials or tools or help."

Blades frowned. His own half-formulated doubts shouldered to the fore, which was doubly unpleasant after he'd been considering Ellen Ziska. "They tell me the international situation at home is O.K.," he offered.

Avis nodded. "What newsfaxes we get in the mail indicate as much," she said. "So why this hanky-panky?" After a moment, in a changed voice: "Jimmy, you begin to scare me a little."

"I scare myself," Chung said.

"Every morning when you debeard," Blades said; but his heart wasn't in it. He shook himself and protested: "Damnation, they're our own countrymen. We're engaged in a lawful business. Why should they do anything to us?"

"Maybe Avis can throw some light on that," Chung suggested.

The girl twisted her fingers together. "Not me," she said. "I'm no politician."

"But you were home not so long ago. You talked with people, read the news, watched the 3V. Can't you at least give an impression?"

"N-no—Well, of course the preliminary guns of the election campaign were already being fired. The Social Justice Party was talking a lot about ... oh, it seemed so ridiculous that I didn't pay much attention."

"They talked about how the government had been pouring billions and billions of dollars into space, while overpopulation produced crying needs in America's back yard," Chung said. "We know that much, even in the Belt. We know the appropriations are due to be cut, now the Essjays are in. So what?"

"We don't need a subsidy any longer," Blades remarked. "It'd help a lot, but we can get along without if we have to, and

personally, I prefer that. Less government money means less government control.”

“Sure,” Avis said. “There was more than that involved, however. The Essjays were complaining about the small return on the investment. Not enough minerals coming back to Earth.”

“Well, for Jupiter’s sake,” Blades exclaimed, “what do they expect? We have to build up our capabilities first.”

“They even said, some of them, that enough reward never would be gotten. That under existing financial policies, the Belt would go in for its own expansion, use nearly everything it produced for itself and export only a trickle to America. I had to explain to several of my parents’ friends that I wasn’t really a socially irresponsible capitalist.”

“Is that all the information you have?” Chung asked when she fell silent.

“I ... I suppose so. Everything was so vague. No dramatic events. More of an atmosphere than a concrete thing.”

“Still, you confirm my own impression,” Chung said. Blades jerked his undisciplined imagination back from the idea of a Thing, with bug eyes and tentacles, cast in reinforced concrete, and listened as his partner summed up:

“The popular feeling at home has turned against private enterprise. You can hardly call a corporate monster like Systemic Developments a private enterprise! The new President and Congress share that mood. We can expect to see it manifested in changed laws and regulations. But what has this got to do with a battleship parked a couple of hundred kilometers from us?”

“If the government doesn’t want the asterites to develop much further—” Blades bit hard on his pipestem. “They must know we have a caviar mine here. We’ll be the only city in this entire sector.”

“But we’re still a baby,” Avis said. “We won’t be important for years to come. Who’d have it in for a baby?”

“Besides, we’re Americans, too,” Chung said. “If that

were a foreign ship, the story might be different—Wait a minute! Could they be thinking of establishing a new base here?”

“The Convention wouldn’t allow,” said Blades.

“Treaties can always be renegotiated, or even denounced. But first you have to investigate quietly, find out if it’s worth your while.”

“Hoo hah, what lovely money that’d mean!”

“And lovely bureaucrats crawling out of every file cabinet,” Chung said grimly. “No, thank you. We’ll fight any such attempt to the last lawyer. We’ve got a good basis, too, in our charter. If the suit is tried on Ceres, as I believe it has to be, we’ll get a sympathetic court as well.”

“Unless they ring in an Earthside judge,” Avis warned.

“Yeah, that’s possible. Also, they could spring proceedings on us without notice. We’ve got to find out in advance, so we can prepare. Any chance of pumping some of those officers?”

“Fraid not,” Avis said. “The few who’d be in the know are safely back on shipboard.”

“We could invite ‘em here individually,” said Blades. “As a matter of fact, I already have a date with Lieutenant Ziska.”

“What?” Avis’ mouth fell open.

“Yep,” Blades said complacently. “End of the next watch, so she can observe the *Pallas* arriving. I’m to fetch her on a scooter.” He blew a fat smoke ring. “Look, Jimmy, can you keep everybody off the porch for a while then? Starlight, privacy, soft music on the piccolo—who knows what I might find out?”

“You won’t get anything from *her*,” Avis spat. “No secrets or, or anything.”

“Still, I look forward to making the attempt. C’mon, pal, pass the word. I’ll do as much for you sometime.”

“Times like that never seem to come for me,” Chung groaned.

“Oh, let him play around with his suicide blonde,” Avis said furiously. “We others have work to do. I ... I’ll tell you what, Jimmy. Let’s not eat in the mess tonight. I’ll draw our rations and fix us something special in your cabin.”

A scooter was not exactly the ideal steed for a knight to convey his lady. It amounted to little more than three saddles and a locker, set atop an accumulator-powered gyrogravitic engine, sufficient to lift you off an asteroid and run at low acceleration. There were no navigating instruments. You locked the autopilot’s radar-gravitic sensors onto your target object and it took you there, avoiding any bits of debris which might pass near; but you must watch the distance indicator and press the deceleration switch in time. If the ’pilot was turned off, free maneuver became possible, but that was a dangerous thing to try before you were almost on top of your destination. Stereoscopic vision fails beyond six or seven meters, and the human organism isn’t equipped to gauge cosmic momenta.



Nevertheless, Ellen was enchanted. “This is like a dream,” her voice murmured in Blades’ earplug. “The whole universe, on every side of us. I could almost reach out and pluck those stars.”

“You must have trained in powered spacesuits at the Academy,” he said for lack of a more poetic rejoinder.

“Yes, but that’s not the same. We had to stay near Luna’s night side, to be safe from solar particles, and it bit a great chunk out of the sky. And then everything was so—regulated, disciplined—we did what we were ordered to do, and that was that. Here I feel free. You can’t imagine how free.” Hastily: “Do you use this machine often?”

“Well, yes, we have about twenty scooters at the Station. They’re the most convenient way of flitting with a load:

out to the mirrors to change accumulators, for instance, or across to one of the companion rocks where we're digging some ores that the Sword doesn't have. That kind of work." Blades would frankly rather have had her behind him on a motorskimmer, hanging on as they careened through a spring-time countryside. He was glad when they reached the main forward air lock and debarked.

He was still gladder when the suits were off. Lieutenant Ziska in dress uniform was stunning, but Ellen in civvies, a fluffy low-cut blouse and close-fitting slacks, was a hydrogen blast. He wanted to roll over and pant, but settled for saying, "Welcome back" and holding her hand rather longer than necessary.

With a shy smile, she gave him a package. "I drew this before leaving," she said. "I thought, well, your life is so austere—"

"A demi of Sandeman," he said reverently. "I won't tell you you shouldn't have, but I will tell you you're a sweet girl."

"No, really." She flushed. "After we've put you to so much trouble."

"Let's go crack this," he said. "The *Pallas* has called in, but she won't be visible for a while yet."

They made their way to the verandah, picking up a couple of glasses enroute. Bless his envious heart, Jimmy had warned the other boys off as requested. *I hope Avis cooks him a Cordon Bleu dinner*, Blades thought. *Nice kid, Avis, if she'd quit trying to ... what? ... mother me?* He forgot about her, with Ellen to seat by the rail.

The Milky Way turned her hair frosty and glowed in her eyes. Blades poured the port with much ceremony and raised his glass. "Here's to your frequent return," he said.

Her pleasure dwindled a bit. "I don't know if I should drink to that. We aren't likely to be back, ever."

"Drink anyway. Gling, glang, gloria!" The rims tinkled together. "After all," said Blades, "this isn't the whole universe. We'll both be getting around. See you on Luna?"

“Maybe.”

He wondered if he was pushing matters too hard. She didn't look at ease. “Oh, well,” he said, “if nothing else, this has been a grand break in the monotony for us. I don't wish the Navy ill, but if trouble had to develop, I'm thankful it developed here.”

“Yes—”

“How's the repair work progressing? Slowly, I hope.”

“I don't know.”

“You should have some idea, being in QM.”

“No supplies have been drawn.”

Blades stiffened.

“What's the matter?” Ellen sounded alarmed.

“Huh?” *A fine conspirator I make, if she can see my emotions on me in neon capitals!* “Nothing. Nothing. It just seemed a little strange, you know. Not taking any replacement units.”

“I understand the work is only a matter of making certain adjustments.”

“Then they should've finished a lot quicker, shouldn't they?”

“Please,” she said unhappily. “Let's not talk about it. I mean, there are such things as security regulations.”

Blades gave up on that tack. But Chung's idea might be worth probing a little. “Sure,” he said. “I'm sorry, I didn't mean to pry.” He took another sip as he hunted for suitable words. A beautiful girl, a golden wine ... and vice versa ... why couldn't he simply relax and enjoy himself? Did he have to go fretting about what was probably a perfectly harmless conundrum?... Yes. However, recreation might still combine with business.

“Permit me to daydream,” he said, leaning close to her. “The Navy's going to establish a new base here, and the *Altair* will be assigned to it.”

“Daydream indeed!” she laughed, relieved to get back to a mere flirtation. “Ever hear about the Convention of Vesta?”

“Treaties can be renegotiated,” Blades plagiarized.

“What do we need an extra base for? Especially since the government plans to spend such large sums on social welfare. They certainly don’t want to start an arms race besides.”

Blades nodded. *Jimmy’s notion did seem pretty thin*, he thought with a slight chill, *and now I guess it’s completely whiffed*. Mostly to keep the conversation going, he shrugged and said, “My partner—and me, too, aside from the privilege of your company—wouldn’t have wanted it anyhow. Not that we’re unpatriotic, but there are plenty of other potential bases, and we’d rather keep government agencies out of here.”

“Can you, these days?”

“Pretty much. We’re under a new type of charter, as a private partnership. The first such charter in the Belt, as far as I know, though there’ll be more in the future. The Bank of Ceres financed us. We haven’t taken a nickel of federal money.”

“Is that possible?”

“Just barely. I’m no economist, but I can see how it works. Money represents goods and labor. Hitherto those have been in mighty short supply out here. Government subsidies made up the difference, enabling us to buy from Earth. But now the asterites have built up enough population and industry that they have some capital surplus of their own, to invest in projects like this.”

“Even so, frankly, I’m surprised that two men by themselves could get such a loan. It must be huge. Wouldn’t the bank rather have lent the money to some corporation?”

“To tell the truth, we have friends who pulled wires for us. Also, it was done partly on ideological grounds. A lot of asterites would like to see more strictly home-grown enterprises, not committed to anyone on Earth. That’s the only way we can grow. Otherwise our profits—our net production, that is—will continue to be siphoned off for the mother country’s benefit.”

“Well,” Ellen said with some indignation, “that was the whole reason for planting asteroid colonies. You can’t expect

us to set you up in business, at enormous cost to ourselves—things we might have done at home—and get nothing but ‘Ta’ in return.”

“Never fear, we’ll repay you with interest,” Blades said. “But whatever we make from our own work, over and above that, ought to stay here with us.”

She grew angrier. “Your kind of attitude is what provoked the voters to elect Social Justice candidates.”

“Nice name, that,” mused Blades. “Who can be against social justice? But you know, I think I’ll go into politics myself. I’ll organize the North American Motherhood Party.”

“You wouldn’t be so flippant if you’d go see how people have to live back there.”

“As bad as here? *Whew!*”

“Nonsense. You know that isn’t true. But bad enough. And you aren’t going to stick in these conditions. Only a few hours ago, you were bragging about the millions you intend to make.”

“Millions *and* millions, if my strength holds out,” leered Blades, thinking of the alley in Aresopolis. But he decided that that was then and Ellen was now, and what had started as a promising little party was turning into a dismal argument about politics.

“Let’s not fight,” he said. “We’ve got different orientations, and we’d only make each other mad. Let’s discuss our next bottle instead ... at the Coq d’Or in Paris, shall we say? Or Morraine’s in New York.”

She calmed down, but her look remained troubled. “You’re right, we are different,” she said low. “Isolated, living and working under conditions we can hardly imagine on Earth—and you can’t really imagine our problems—yes, you’re becoming another people. I hope it will never go so far that—No. I don’t want to think about it.” She drained her glass and held it out for a refill, smiling. “Very well, sir, when do you next plan to be in Paris?”

An exceedingly enjoyable while later, the time came to go watch the *Pallas Castle* maneuver in. In fact, it had somehow gotten past that time, and they were late; but they didn't hurry their walk aft. Blades took Ellen's hand; and she raised no objection. Schoolboyish, no doubt—however, he had reached the reluctant conclusion that for all his dishonorable intentions, this affair wasn't likely to go beyond the schoolboy stage. Not that he wouldn't keep trying.



As they glided through the refining and synthesizing section, which filled the broad half of the asteroid, the noise of pumps and regulators rose until it throbbed in their bones. Ellen gestured at one of the pipes which crossed the corridor overhead. "Do you really handle that big a volume at a time?" she asked above the racket.

"No," he said. "Didn't I explain before? The pipe's thick because it's so heavily armored."

"I'm glad you don't use that dreadful word 'cladded.' But why the armor? High pressure?"

"Partly. Also, there's an inetrans lining. Jupiter gas is hellishly reactive at room temperature. The metallic complexes especially; but think what a witch's brew the stuff is in every respect. Once it's been refined, of course, we have less trouble. That particular pipe is carrying it raw."

They left the noise behind and passed on to the approach control dome at the receptor end. The two men on duty

glanced up and immediately went back to their instruments. Radio voices were staccato in the air. Blades led Ellen to an observation port.

She drew a sharp breath. Outside, the broken ground fell away to space and the stars. The ovoid that was the ship hung against them, lit by the hidden sun, a giant even at her distance but dwarfed by the balloon she towed. As that bubble tried ponderously to rotate, rainbow gleams ran across it, hiding and then revealing the constellations. Here, on the asteroid's axis, there was no weight, and one moved with underwater smoothness, as if disembodied. "Oh, a fairy tale," Ellen sighed.

Four sparks flashed out of the boat blisters along the ship's hull. "Scoopships," Blades told her. "They haul the cargo in, being so much more maneuverable. Actually, though, the mother vessel is going to park her load in orbit, while those boys bring in another one ... see, there it comes into sight. We still haven't got the capacity to keep up with our deliveries."

"How many are there? Scoopships, that is."

"Twenty, but you don't need more than four for this job. They've got terrific power. Have to, if they're to dive from orbit down into the Jovian atmosphere, ram themselves full of gas, and come back. There they go."

The *Pallas Castle* was wrestling the great sphere she had hauled from Jupiter into a stable path computed by Central Control. Meanwhile the scoopships, small only by comparison with her, locked onto the other balloon as it drifted close. Energy poured into their drive fields. Spiraling downward, transparent globe and four laboring spacecraft vanished behind the horizon. The *Pallas* completed her own task, disengaged her towbars, and dropped from view, headed for the dock.

The second balloon rose again, like a huge glass moon on the opposite side of the Sword. Still it grew in Ellen's eyes, kilometer by kilometer of approach. So much mass wasn't easily handled, but the braking curve looked disdainfully smooth. Presently she could make out the scoopships in detail, elongat-

ed teardrops with the intake gates yawning in the blunt forward end, cockpit canopies raised very slightly above.

Instructions rattled from the men in the dome. The balloon veered clumsily toward the one free receptor. A derrick-like structure released one end of a cable, which streamed skyward. Things that Ellen couldn't quite follow in this tricky light were done by the four tugs, mechanisms of their own extended to make their tow fast to the cable.

They did not cast loose at once, but continued to drag a little, easing the impact of centrifugal force. Nonetheless a slight shudder went through the dome as slack was taken up. Then the job was over. The scoopships let go and flitted off to join their mother vessel. The balloon was winched inward. Spacesuited men moved close, preparing to couple valves together.

“And eventually,” Blades said into the abrupt quietness, “that cargo will become food, fabric, vitryl, plastiboard, reagents, fuels, a hundred different things. That's what we're here for.”

“I've never seen anything so wonderful,” Ellen said raptly. He laid an arm around her waist.

The intercom chose that precise moment to blare: “Attention! Emergency! All hands to emergency stations! Blades, get to Chung's office on the double! All hands to emergency stations!”

Blades was running before the siren had begun to howl.

Rear Admiral Barclay Hulse had come in person. He stood as if on parade, towering over Chung. The asterite was red with fury. Avis Page crouched in a corner, her eyes terrified.

Blades barreled through the doorway and stopped hardly short of a collision. “What's the matter?” he puffed.

“Plenty!” Chung snarled. “These incredible thumb-fumbled oafs—” His voice broke. *When he gets mad, it means something!*

Hulse nailed Blades with a glance. “Good day, sir,” he

clipped. "I have had to report a regrettable accident which will require you to evacuate the Station. Temporarily, I hope."

"Huh?"

"As I told Mr. Chung and Miss Page, a nuclear missile has escaped us. If it explodes, the radiation will be lethal, even in the heart of the asteroid."

"What ... what—" Blades could only gobble at him.

"Fortunately, the *Pallas Castle* is here. She can take your whole complement aboard and move to a safe distance while we search for the object."

"How the *devil*?"

Hulse allowed himself a look of exasperation. "Evidently I'll have to repeat myself to you. Very well. You know we have had to make some adjustments on our launchers. What you did not know was the reason. Under the circumstances, I think it's permissible to tell you that several of them have a new and secret, experimental control system. One of our missions on this cruise was to carry out field tests. Well, it turned out that the system is still full of, ah, bugs. Gunnery Command has had endless trouble with it, has had to keep tinkering the whole way from Earth.

"Half an hour ago, while Commander Warburton was completing a reassembly—lower ranks aren't allowed in the test turrets—something happened. I can't tell you my guess as to what, but if you want to imagine that a relay got stuck, that will do for practical purposes. A missile was released under power. Not a dummy—the real thing. And release automatically arms the war head."

The news was like a hammerblow. Blades spoke an obscenity. Sweat sprang forth under his arms and trickled down his ribs.

"No such thing was expected," Hulse went on. "It's an utter disaster, and the designers of the system aren't likely to get any more contracts. But as matters were, no radar fix was gotten on it, and it was soon too far away for gyrogravitic pulse detection. The thrust vector is unknown. It could be al-

most anywhere now.

“Well, naval missiles are programmed to reverse acceleration if they haven’t made a target within a given time. This one should be back in less than six hours. If it first detects our ship, everything is all right. It has optical recognition circuits that identify any North American warcraft by type, disarm the war head, and steer it home. But, if it first comes within fifty kilometers of some other mass—like this asteroid or one of the companion rocks—it will detonate. We’ll make every effort to intercept, but space is big. You’ll have to take your people to a safe distance. They can come back even after a blast, of course. There’s no concussion in vacuum, and the fireball won’t reach here. It’s principally an anti-personnel weapon. But you must not be within the lethal radius of radiation.”

“The hell we can come back!” Avis cried.

“I beg your pardon?” Hulse said.

“You imbecile! Don’t you know Central Control here is cryotronic?”

Hulse did not flicker an eyelid. “So it is,” he said expressionlessly. “I had forgotten.”

Blades mastered his own shock enough to grate: “Well, we sure haven’t. If that thing goes off, the gamma burst will kick up so many minority carriers in the transistors that the *p*-type crystals will act *n*-type, and the *n*-type act *p*-type, for a whole couple of microseconds. Every one of ‘em will flip simultaneously! The computers’ memory and program data systems will be scrambled beyond hope of reorganization.”

“Magnetic pulse, too,” Chung said. “The fireball plasma will be full of inhomogeneities moving at several per cent of light speed. Their electromagnetic output, hitting our magnetic core units, will turn them from super to ordinary conduction. Same effect, total computer amnesia. We haven’t got enough shielding against it. Your TIMM systems can take that kind of a beating. Ours can’t!”

“Very regrettable,” Hulse said. “You’d have to reprogram everything—”

“Reprogram what?” Avis retorted. Tears started forth in her eyes. “We’ve told you what sort of stuff our chemical plant is handling. We can’t shut it down on that short notice. It’ll run wild. There’ll be sodium explosions, hydrogen and organic combustion, n-n-nothing left here but wreckage!”

Hulse didn’t unbend a centimeter. “I offer my most sincere apologies. If actual harm does occur, I’m sure the government will indemnify you. And, of course, my command will furnish what supplies may be needed for the *Pallas Castle* to transport you to the nearest Commission base. At the moment, though, you can do nothing but evacuate and hope we will be able to intercept the missile.”

Blades knotted his fists. A sudden comprehension rushed up in him and he bellowed, “There isn’t going to be an interception! This wasn’t an accident!”

Hulse backed a step and drew himself even straighter. “Don’t get overwrought,” he advised.

“You louse-bitten, egg-sucking, bloated faggot-porter! How stupid do you think we are? As stupid as your Essjay bosses? By heaven, we’re staying! Then see if you have the nerve to murder a hundred people!”

“Mike ... Mike—” Avis caught his arm.

Hulse turned to Chung. “I’ll overlook that unseemly outburst,” he said. “But in light of my responsibilities and under the provisions of the Constitution, I am hereby putting this asteroid under martial law. You will have all personnel aboard the *Pallas Castle* and at a minimum distance of a thousand kilometers within four hours of this moment, or be subject to arrest and trial. Now I have to get back and commence operations. The *Altair* will maintain radio contact with you. Good day.” He bowed curtly, spun on his heel, and clacked from the room.

Blades started to charge after him. Chung caught his free arm. Together he and Avis dragged him to a stop. He stood cursing the air ultraviolet until Ellen entered.

“I couldn’t keep up with you,” she panted. “What’s hap-

pened, Mike?"

The strength drained from Blades. He slumped into a chair and covered his face.

Chung explained in a few harsh words. "Oh-h-h," Ellen gasped. She went to Blades and laid her hands on his shoulders. "My poor Mike!"

After a moment she looked at the others. "I should report back, of course," she said, "but I won't be able to before the ship accelerates. So I'll have to stay with you till afterward. Miss Page, we left about half a bottle of wine on the verandah. I think it would be a good idea if you went and got it."

Avis bridled. "And why not you?"

"This is no time for personalities," Chung said. "Go on, Avis. You can be thinking what records and other paper we should take, while you're on your way. I've got to organize the evacuation. As for Miss Ziska, well, Mike needs somebody to pull him out of his dive."

"Her?" Avis wailed, and fled.

Chung sat down and flipped his intercom to Phone Central. "Get me Captain Janichevski aboard the *Pallas*," he ordered. "Hello, Adam? About that general alarm—"

Blades raised a haggard countenance toward Ellen's. "You better clear out, along with the women and any men who don't want to stay," he said. "But I think most of them will take the chance. They're on a profit-sharing scheme, they stand to lose too much if the place is ruined."

"What do you mean?"

"It's a gamble, but I don't believe Hulse's sealed orders extend to murder. If enough of us stay put, he'll have to catch that thing. He jolly well knows its exact trajectory."

"You forget we're under martial law," Chung said, aside to him. "If we don't go freely, he'll land some PP's and march us off at gunpoint. There isn't any choice. We've had the course."

"I don't understand," Ellen said shakily.

Chung went back to his intercom. Blades fumbled out

his pipe and rolled it empty between his hands. “That missile was shot off on purpose,” he said.

“What? No, you must be sick, that’s impossible!”

“I realize you didn’t know about it. Only three or four officers have been told. The job had to be done very, very secretly, or there’d be a scandal, maybe an impeachment. But it’s still sabotage.”

She shrank from him. “You’re not making sense.”

“Their own story doesn’t make sense. It’s ridiculous. A new missile system wouldn’t be sent on a field trial clear to the Belt before it’d had enough tests closer to home to get the worst bugs out. A war-head missile wouldn’t be stashed anywhere near something so unreliable, let alone be put under its control. The testing ship wouldn’t hang around a civilian Station while her gunnery chief tinkered. And Hulse, Warburton, Liebnecht, they were asking in *such* detail about how radiation-proof we are.”

“I can’t believe it. Nobody will.”

“Not back home. Communication with Earth is so sparse and garbled. The public will only know there was an accident; who’ll give a hoot about the details? We couldn’t even prove anything in an asteroid court. The Navy would say, ‘Classified information!’ and that’d stop the proceedings cold. Sure, there’ll be a board of inquiry—composed of naval officers. Probably honorable men, too. But what are they going to believe, the sworn word of their Goddard House colleague, or the rantings of an asterite bum?”

“Mike, I know this is terrible for you, but you’ve let it go to your head.” Ellen laid a hand over his. “Suppose the worst happens. You’ll be compensated for your loss.”

“Yeah. To the extent of our personal investment. The Bank of Ceres still has nearly all the money that was put in. We didn’t figure to have them paid off for another ten years. They, or their insurance carrier, will get the indemnity. And after our fiasco, they won’t make us a new loan. They were just barely talked into it, the first time around. I daresay Systemic

Developments will make them a nice juicy offer to take this job over.”

Ellen colored. She stamped her foot. “You’re talking like a paranoiac. Do you really believe the government of North America would send a battleship clear out here to do you dirt?”

“Not the whole government. A few men in the right positions is all that’s necessary. I don’t know if Hulse was bribed or talked into this. But probably he agreed as a duty. He’s the prim type.”

“A duty—to destroy a North American business?”

Chung finished at the intercom in time to answer: “Not permanent physical destruction, Miss Ziska. As Mike suggested, some corporation will doubtless inherit the Sword and repair the damage. But a private, purely asterite business ... yes, I’m afraid Mike’s right. We are the target.”

“In mercy’s name, why?”

“From the highest motives, of course,” Chung sneered bitterly. “You know what the Social Justice Party thinks of private capitalism. What’s more important, though, is that the Sword is the first Belt undertaking not tied to Mother Earth’s apron strings. We have no commitments to anybody back there. We can sell our output wherever we like. It’s notorious that the asterites are itching to build up their own self-sufficient industries. Quite apart from sentiment, we can make bigger profits in the Belt than back home, especially when you figure the cost of sending stuff in and out of Earth’s gravitational well. So certainly we’d be doing most of our business out here.

“Our charter can’t simply be revoked. First a good many laws would have to be revised, and that’s politically impossible. There is still a lot of individualist sentiment in North America, as witness the fact that businesses do get launched and that the Essjays did have a hard campaign to get elected. What the new government wants is something like the Eighteenth Century English policy toward America. Keep the colonies as a source of raw materials and as a market for man-

ufactured goods, but don't let them develop a domestic industry. You can't come right out and say that, but you can let the situation develop naturally.

"Only ... here the Sword is, obviously bound to grow rich and expand in every direction. If we're allowed to develop, to reinvest our profits, we'll become the nucleus of independent asterite enterprise. If, on the other hand, we're wiped out by an unfortunate accident, there's no nucleus; and a small change in the banking laws is all that's needed to prevent others from getting started. Q.E.D."

"I daresay Hulse does think he's doing his patriotic duty," said Blades. "He wants to guarantee North America our natural resources—in the long run, maybe, our allegiance. If he has to commit sabotage, too bad, but it won't cost him any sleep."

"No!" Ellen almost screamed.

Chung sagged in his chair. "We're very neatly trapped," he said like an old man. "I don't see any way out. Think you can get to work now, Mike? You can assign group leaders for the evacuation—"

Blades jumped erect. "I can fight!" he growled.

"With what? Can openers?"

"You mean you're going to lie down and let them break us?"

Avis came back. She thrust the bottle into Blades' hands as he paced the room. "Here you are," she said in a distant voice.

He held it out toward Ellen. "Have some," he invited.

"Not with you ... you subversive!"

Avis brightened noticeably, took the bottle and raised it. "Then here's to victory," she said, drank, and passed it to Blades.

He started to gulp; but the wine was too noble, and he found himself savoring its course down his throat. *Why, he thought vaguely, do people always speak with scorn about Dutch courage? The Dutch have real guts. They fought themselves free of*

Spain and free of the ocean itself; when the French or Germans came, they made the enemy sea their ally—

The bottle fell from his grasp. In the weak acceleration, it hadn't hit the floor when Avis rescued it. "Gimme that, you big butterfingers," she exclaimed. Her free hand clasped his arm. "Whatever happens, Mike," she said to him, "we're not quitting."

Still Blades stared beyond her. His fists clenched and unclenched. The noise of his breathing filled the room. Chung looked around in bewilderment; Ellen watched with waxing horror; Avis' eyes kindled.

"Holy smoking seegars," Blades whispered at last. "I really think we can swing it."

Captain Janichevski recoiled. "You're out of your skull!"

"Probably," said Blades. "Fun, huh?"

"You can't do this."

"We can try."

"Do you know what you're talking about? Insurrection, that's what. Quite likely piracy. Even if your scheme worked, you'd spend the next ten years in Rehab—at least."

"Maybe, provided the matter ever came to trial. But it won't."

"That's what you think. You're asking me to compound the felony, and misappropriate the property of my owners to boot." Janichevski shook his head. "Sorry, Mike. I'm sorry as hell about this mess. But I won't be party to making it worse."

"In other words," Blades replied, "you'd rather be party to sabotage. I'm proposing an act of legitimate self-defense."

"If there actually is a conspiracy to destroy the Station."

"Adam, you're a spaceman. You know how the Navy operates. Can you swallow that story about a missile getting loose by accident?"

Janichevski bit his lip. The sounds from outside filled the captain's cabin, voices, footfalls, whirr of machines and clash of doors, as the *Pallas Castle* readied for departure. Blades waited.

“You may be right,” said Janichevski at length, wretchedly.

“Though why Hulse should jeopardize his career—”

“He’s not. There’s a scapegoat groomed back home, you can be sure. Like some company that’ll be debarred from military contracts for a while ... and get nice fat orders in other fields. I’ve kicked around the System enough to know how that works.”

“If you’re wrong, though ... if this is an honest blunder ... then you risk committing treason.”

“Yeah. I’ll take the chance.”

“Not I. No. I’ve got a family to support,” Janichevski said.

Blades regarded him bleakly. “If the Essjays get away with this stunt, what kind of life will your family be leading, ten years from now? It’s not simply that we’ll be high-class persons in the Belt. But tied hand and foot to a shortsighted government, how much progress will we be able to make? Other countries have colonies out here too, remember, and some of them are already giving their people a freer hand than we’ve got. Do you want the Asians, or the Russians, or even the Europeans, to take over the asteroids?”

“I can’t make policy.”

“In other words, mama knows best. Believe, obey, anything put out by some bureaucrat who never set foot beyond Luna. Is that your idea of citizenship?”

“You’re putting a mighty fine gloss on bailing yourself out!” Janichevski flared.

“Sure, I’m no idealist. But neither am I a slave,” Blades hesitated. “We’ve been friends too long, Adam, for me to try bribing you. But if worst comes to worst, we’ll cover for you ... somehow ... and if contrariwise we win, then we’ll soon be hiring captains for our own ships and you’ll get the best offer any spaceman ever got.”

“No. Scram. I’ve work to do.”

Blades braced himself. “I didn’t want to say this. But

I've already informed a number of my men. They're as mad as I am. They're waiting in the terminal. A monkey wrench or a laser torch makes a pretty fair weapon. We can take over by force. That'll leave you legally in the clear. But with so many witnesses around, you'll have to prefer charges against us later on."

Janichevski began to sweat.

"We'll be sent up," said Blades. "But it will still have been worth it."

"Is it really that important to you?"

"Yes. I admit I'm no crusader. But this is a matter of principle."

Janichevski stared at the big red-haired man for a long while. Suddenly he stiffened. "O.K. On that account, and no other, I'll go along with you."

Blades wobbled on his feet, near collapse with relief. "Good man!" he croaked.

"But I will not have any of my officers or crew involved."

Blades rallied and answered briskly, "You needn't. Just issue orders that my boys are to have access to the scoopships. They can install the equipment, jockey the boats over to the full balloons, and even couple them on."

Janichevski's fears had vanished once he made his decision, but now a certain doubt registered. "That's a pretty skilled job."

"These are pretty skilled men. It isn't much of a maneuver, not like making a Jovian sky dive."

"Well, O.K., I'll take your word for their ability. But suppose the *Altair* spots those boats moving around?"

"She's already several hundred kilometers off, and getting farther away, running a search curve which I'm betting my liberty—and my honor; I certainly don't want to hurt my own country's Navy—I'm betting that search curve is guaranteed not to find the missile in time. They'll spot the *Pallas* as you depart—oh, yes, our people will be aboard as per orders—

but no finer detail will show in so casual an observation.”

“Again, I’ll take your word. What else can I do to help?”

“Nothing you weren’t doing before. Leave the piratics to us. I’d better get back.” Blades extended his hand. “I haven’t got the words to thank you, Adam.”

Janichevski accepted the shake. “No reason for thanks. You dragooned me.” A grin crossed his face. “I must confess though, I’m not sorry you did.”

Blades left. He found his gang in the terminal, two dozen engineers and rockjacks clumped tautly together.

“What’s the word?” Carlos Odonaju shouted.

“Clear track,” Blades said. “Go right aboard.”

“Good. Fine. I always wanted to do something vicious and destructive,” Odonaju laughed.

“The idea is to prevent destruction,” Blades reminded him, and proceeded toward the office.

Avis met him in Corridor Four. Her freckled countenance was distorted by a scowl. “Hey, Mike, wait a minute,” she said, low and hurriedly. “Have you seen La Ziska?”

“The lieutenant? Why, no. I left her with you, remember, hoping you could calm her down.”

“Uh-huh. She was incandescent mad. Called us a pack of bandits and—But then she started crying. Seemed to break down completely. I took her to your cabin and went back to help Jimmy. Only, when I checked there a minute ago, she was gone.”

“What? Where?”

“How should I know? But that she-devil’s capable of anything to wreck our chances.”

“You’re not being fair to her. She’s got an oath to keep.”

“All right,” said Avis sweetly. “Far be it from me to prevent her fulfilling her obligations. Afterward she may even write you an occasional letter. I’m sure that’ll brighten your Rehab cell no end.”

“What can she do?” Blades argued, with an uneasy sense of whistling in the dark. “She can’t get off the asteroid

without a scooter, and I've already got Sam's gang working on all the scooters."

"Is there no other possibility? The radio shack?"

"With a man on duty there. That's out." Blades patted the girl's arm.

"O.K., I'll get back to work. But ... I'll be so glad when this is over, Mike!"

Looking into the desperate brown eyes, Blades felt a sudden impulse to kiss their owner. But no, there was too much else to do. Later, perhaps. He cocked a thumb upward. "Carry on."

Too bad about Ellen, he thought as he continued toward his office. What an awful waste, to make a permanent enemy of someone with her kind of looks. And personality—Come off that stick, you clabberhead! She's probably the marryin' type anyway.

In her shoes, though, what would I do? Not much; they'd pinch my feet. But—damnation, Avis is right. She's not safe to have running around loose. The radio shack? Sparks is not one of the few who've been told the whole story and co-opted into the plan. She could—

Blades cursed, whirled, and ran.

His way was clear. Most of the men were still in their dorms, preparing to leave. He traveled in huge low-gravity leaps.

The radio shack rose out of the surface near the verandah. Blades tried the door. It didn't budge. A chill went through him. He backed across the corridor and charged. The door was only plastiboard—

He hit with a thud and a grunt, and rebounded with a numbed shoulder. But it looked so easy for the cops on 3V!

No time to figure out the delicate art of forcible entry. He hurled himself against the panel, again and again, heedless of the pain that struck in flesh and bone. When the door finally, splinteringly gave way, he stumbled clear across the room beyond, fetched up against an instrument console, recovered his balance, and gaped.

The operator lay on the floor, swearing in a steady monotone. He had been efficiently bound with his own blouse and trousers, which revealed his predilection for maroon shorts with zebra stripes. There was a lump on the back of his head, and a hammer lay close by. Ellen must have stolen the tool and come in here with the thing behind her back. The operator would have had no reason to suspect her.

She had not left the sender's chair, not even while the door was under attack. Only a carrier beam connected the Sword with the *Altair*. She continued doggedly to fumble with dials and switches, trying to modulate it and raise the ship.

"Praises be ... you haven't had advanced training ... in radio," Blades choked. "That's ... a long-range set ... pretty special system—" He weaved toward her. "Come along, now."



She spat an unladylike refusal.

Theoretically, Blades should have enjoyed the tussle that followed. But he was in poor shape at the outset. And he was a good deal worse off by the time he got her pinioned.

"O.K.," he wheezed. "Will you come quietly?"

She didn't deign to answer, unless you counted her butting him in the nose. He had to yell for help to frog-march her aboard ship.

"*Pallas Castle* calling NASS *Altair*. Come in, *Altair*."

The great ovoid swung clear in space, among a million cold stars. The asteroid had dwindled out of sight. A radio beam flickered across emptiness. Within the hull, the crew and a hundred refugees sat jammed together. The air was thick with their breath and sweat and waiting.

Blades and Chung, seated by the transmitter, felt another

er kind of thickness, the pull of the internal field. Earth-normal weight dragged down every movement; the enclosed cabin began to feel suffocatingly small. *We'd get used to it again pretty quickly*, Blades thought. *Our bodies would, that is. But our own selves, tied down to Earth forever—no.*

The vision screen jumped to life. "NASS *Altair* acknowledging *Pallas Castle*," said the uniformed figure within.

"O.K., Charlie, go outside and don't let anybody else enter," Chung told his own operator.

The spaceman gave him a quizzical glance, but obeyed. "I wish to report that evacuation of the *Sword* is now complete," Chung said formally.

"Very good, sir," the Navy face replied. "I'll inform my superiors."

"Wait, don't break off yet. We have to talk with your captain."

"Sir? I'll switch you over to—"

"None of your damned chains of command," Blades interrupted. "Get me Rear Admiral Hulse direct, toot sweet, or I'll eat out whatever fraction of you he leaves unchewed. This is an emergency. I've got to warn him of an immediate danger only he can deal with."

The other stared, first at Chung's obvious exhaustion, then at the black eye and assorted bruises, scratches, and bites that adorned Blades' visage. "I'll put the message through Channel Red at once, sir." The screen blanked.

"Well, here we go," Chung said. "I wonder how the food in Rehab is these days."

"Want me to do the talking?" Blades asked. Chung wasn't built for times as hectic as the last few hours, and was worn to a nubbin. He himself felt immensely keyed up. He'd always liked a good fight.

"Sure." Chung pulled a crumpled cigarette from his pocket and began to fill the cabin with smoke. "You have a larger stock of rudeness than I."

Presently the screen showed Hulse, rigid at his post on

the bridge. "Good day, gentlemen," he said. "What's the trouble?"

"Plenty," Blades answered. "Clear everybody else out of there; let your ship orbit free a while. And seal your circuit."

Hulse reddened. "Who do you think you are?"

"Well, my birth certificate says Michael Joseph Blades. I've got some news for you concerning that top-secret gadget you told us about. You wouldn't want unauthorized personnel listening in."

Hulse leaned forward till he seemed about to fall through the screen. "What's this about a hazard?"

"Fact. The *Altair* is in distinct danger of getting blown to bits."

"Have you gone crazy? Get me the captain of the *Pallas*."

"Very small bits."

Hulse compressed his lips. "All right, I'll listen to you for a short time. You had better make it worth my while."

He spoke orders. Blades scratched his back while he waited for the bridge to be emptied and wondered if there was any chance of a hot shower in the near future.

"Done," said Hulse. "Give me your report."

Blades glanced at the telltale. "You haven't sealed your circuit, admiral."

Hulse said angry words, but complied. "Now will you talk?"

"Sure. This secrecy is for your own protection. You risk court-martial otherwise."

Hulse suppressed a retort.



“O.K., here’s the word.” Blades met the transmitted glare with an almost palpable crash of eyeballs. “We decided, Mr. Chung and I, that any missile rig as haywire as yours represents a menace to navigation and public safety. If you can’t control your own nuclear weapons, you shouldn’t be at large. Our charter gives us local authority as peace officers. By virtue thereof and so on and so forth, we ordered certain precautionary steps taken. As a result, if that war head goes off, I’m sorry to say that NASS *Altair* will be destroyed.”

“Are you ... have you—” Hulse congealed. In spite of everything, he was a competent officer, Blades decided. “Please explain yourself,” he said without tone.

“Sure,” Blades obliged. “The Station hasn’t got any armament, but trust the human race to juryrig that. We commandeered the scoopships belonging to this vessel and loaded them with Jovian gas at maximum pressure. If your missile detonates, they’ll dive on you.”

Something like amusement tinged Hulse’s shocked expression. “Do you seriously consider that a weapon?”

“I seriously do. Let me explain. The ships are orbiting free right now, scattered through quite a large volume of space. Nobody’s aboard them. What is aboard each one, though, is an autopilot taken from a scooter, hooked into the drive controls. Each ‘pilot has its sensors locked onto your ship. You can’t maneuver fast enough to shake off radar beams and mass detectors. You’re the target object, and there’s nothing to tell those idiot computers to decelerate as they approach you.

“Of course, no approach is being made yet. A switch has been put in every scooter circuit, and left open. Only the meteorite evasion units are operative right now. That is, if anyone tried to lay alongside one of those scoopships, he’d be detected and the ship would skitter away. Remember, a scoopship hasn’t much mass, and she does have engines designed for diving in and out of Jupe’s gravitational well. She can out-accelerate either of our vessels, or any boat of yours, and out-dodge

any of your missiles. You can't catch her."

Hulse snorted. "What's the significance of this farce?"

"I said the autopilots were switched off at the moment, as far as heading for the target is concerned. But each of those switches is coupled to two other units. One is simply the sensor box. If you withdraw beyond a certain distance, the switches will close. That is, the 'pilots will be turned on if you try to go beyond range of the beams now locked onto you. The other unit we've installed in every boat is an ordinary two-for-a-dollar radiation meter. If a nuclear weapon goes off, anywhere within a couple of thousand kilometers, the switches will also close. In either of those cases, the scoopships will dive on you.

"You might knock out a few with missiles, before they strike. Undoubtedly you can punch holes in them with laser guns. But that won't do any good, except when you're lucky enough to hit a vital part. Nobody's aboard to be killed. Not even much gas will be lost, in so short a time.

"So to summarize, chum, if that rogue missile explodes, your ship will be struck by ten to twenty scoopships, each crammed full of concentrated Jovian air. They'll pierce that thin hull of yours, but since they're already pumped full beyond the margin of safety, the impact will split them open and the gas will whoosh out. Do you know what Jovian air does to substances like magnesium?"

"You can probably save your crew, take to the boats and reach a Commission base. But your nice battleship will be *ganz kaput*. Is your game worth that candle?"

"You're totally insane! Releasing such a thing—"

"Oh, not permanently. There's one more switch on each boat, connected to the meteorite evasion unit and controlled by a small battery. When those batteries run down, in about twenty hours, the 'pilots will be turned off completely. Then we can spot the scoopships by radar and pick 'em up. And you'll be free to leave."

"Do you think for one instant that your fantastic claim of acting legally will stand up in court?"

“No, probably not. But it won’t have to. Obviously you can’t make anybody swallow your yarn if a *second* missile gets loose. And as for the first one, since it’s failed in its purpose, your bosses aren’t going to want the matter publicized. It’d embarrass them to no end, and serve no purpose except revenge on Jimmy and me—which there’s no point in taking, since the Sword would still be privately owned. You check with Earth, admiral, before shooting off your mouth. They’ll tell you that both parties to this quarrel had better forget about legal action. Both would lose.

“So I’m afraid your only choice is to find that missile before it goes off.”

“And yours? What are your alternatives?” Hulse had gone gray in the face, but he still spoke stoutly.

Blades grinned at him. “None whatsoever. We’ve burned our bridges. We can’t do anything about those scoopships now, so it’s no use trying to scare us or arrest us or whatever else may occur to you. What we’ve done is establish an automatic deterrent.”

“Against an, an attempt ... at sabotage ... that only exists in your imagination!”

Blades shrugged. “That argument isn’t relevant any longer. I do believe the missile was released deliberately. We wouldn’t have done what we did otherwise. But there’s no longer any point in making charges and denials. You’d just better retrieve the thing.”

Hulse squared his shoulders. “How do I know you’re telling the truth?”

“Well, you can send a man to the Station. He’ll find the scooters lying gutted. Send another man over here to the *Pallas*. He’ll find the scoopships gone. I also took a few photographs of the autopilots being installed and the ships being cast adrift. Go right ahead. However, may I remind you that the fewer people who have an inkling of this little intrigue, the better for all concerned.”

Hulse opened his mouth, shut it again, stared from side

to side, and finally slumped the barest bit. "Very well," he said, biting off the words syllable by syllable. "I can't risk a ship of the line. Of course, since the rogue is still farther away than your deterrent allows the *Altair* to go, we shall have to wait in space a while."

"I don't mind."

"I shall report the full story to my superiors at home ... but unofficially."

"Good. I'd like them to know that we asterites have teeth."

"Signing off, then."

Chung stirred. "Wait a bit," he said. "We have one of your people aboard, Lieutenant Ziska. Can you send a gig for her?"

"She didn't collaborate with us," Blades added. "You can see the evidence of her loyalty, all over my mug."

"Good girl!" Hulse exclaimed savagely. "Yes, I'll send a boat. Signing off."

The screen blanked. Chung and Blades let out a long, ragged breath. They sat a while trembling before Chung muttered, "That skunk as good as admitted everything."

"Sure," said Blades, "But we won't have any more trouble from him."

Chung stubbed out his cigarette. Poise was returning to both men. "There could be other attempts, though, in the next few years." He scowled. "I think we should arm the Station. A couple of laser guns, if nothing else. We can say it's for protection in case of war. But it'll make our own government handle us more carefully, too."

"Well, you can approach the Commission about it." Blades yawned and stretched, trying to loosen his muscles. "Better get a lot of other owners and supervisors to sign your petition, though." The next order of business came to his mind. He rose. "Why don't you go tell Adam the good news?"

"Where are you bound?"

"To let Ellen know the fight is over."

“Is it, as far as she’s concerned?”

“That’s what I’m about to find out. Hope I won’t need an armored escort.” Blades went from the cubicle, past the watchful radioman, and down the deserted passageway beyond.

The cabin given her lay at the end, locked from outside. The key hung magnetically on the bulkhead. Blades unlocked the door and tapped it with his knuckles.

“Who’s there?” she called.

“Me,” he said. “May I come in?”

“If you must,” she said freezingly.

He opened the door and stepped through. The overhead light shimmered off her hair and limned her figure with shadows. His heart bumped. “You, uh, you can come out now,” he faltered. “Everything’s O.K.”

She said nothing, only regarded him from glacier-blue eyes.

“No harm’s been done, except to me and Sparks, and we’re not mad,” he groped. “Shall we forget the whole episode?”

“If you wish.”

“Ellen,” he pleaded, “I had to do what seemed right to me.”

“So did I.”

He couldn’t find any more words.

“I assume that I’ll be returned to my own ship,” she said. He nodded. “Then, if you will excuse me, I had best make myself as presentable as I can. Good day, Mr. Blades.”

“What’s good about it?” he snarled, and slammed the door on his way out.

Avis stood outside the jampacked saloon. She saw him coming and ran to meet him. He made swab-O with his fingers and joy blazed from her. “Mike,” she cried, “I’m so happy!”

The only gentlemanly thing to do was hug her. His spirits lifted a bit as he did. She made a nice armful. Not bad looking, either.

“Well,” said Amspauh. “So that’s the inside story. How

very interesting. I never heard it before.”

“No, obviously it never got into any official record,” Missy said. “The only announcement made was that there’d been a near accident, that the Station tried to make counter-missiles out of scoopships, but that the quick action of NASS *Altair* was what saved the situation. Her captain was commended. I don’t believe he ever got a further promotion, though.”

“Why didn’t you publicize the facts afterwards?” Lindgren wondered. “When the revolution began, that is. It would’ve made good propaganda.”

“Nonsense,” Missy said. “Too much else had happened since then. Besides, neither Mike nor Jimmy nor I wanted to do any cheap emotion-fanning. We knew the asterites weren’t any little pink-bottomed angels, nor the people back sunward a crew of devils. There were rights and wrongs on both sides. We did what we could in the war, and hated every minute of it, and when it was over we broke out two cases of champagne and invited as many Earthsiders as we could get to the party. They had a lot of love to carry home for us.”

A stillness fell. She took a long swallow from her glass and sat looking out at the stars.

“Yes,” Lindgren said finally, “I guess that was the worst, fighting against our own kin.”

“Well, I was better off in that respect than some,” Missy conceded. “I’d made my commitment so long before the trouble that my ties were nearly all out here. Twenty years is time enough to grow new roots.”

“Really?” Orloff was surprised. “I haven’t met you often before, Mrs. Blades, so evidently I’ve had a false impression. I thought you were a more recent immigrant than that.”

“Shucks, no,” she laughed. “I only needed six months after the *Altair* incident to think things out, resign my commission and catch the next Belt-bound ship. You don’t think I’d have let a man like Mike get away, do you?”





Phillip K. Dick was a poor man during most of his writing career, despite the fact that he was very prolific, publishing forty four books and well over a hundred short stories.

Even aliterates and illiterates have enjoyed his work, because the movies *Blade Runner*, *Total Recall*, *A Scanner Darkly*, *Minority Report*, *Paycheck*, *Next*, *Screamers*, *The Adjustment Bureau* and *Impostor* were all made from his stories.

He and his twin sister were born in Chicago in 1928. They were born six weeks prematurely, and his twin died six weeks later. His short-lived sister played a part in his work, writing repeatedly of a “phantom twin” in his fiction.

He died of a stroke in 1982.

His first story was published in 1951, and he only wrote after that, although his books, later to become multimillion dollar motion pictures, didn't sell well for a long, long time.

That first story is next.

Beyond Lies the Wub

Phillip K. Dick

They had almost finished with the loading. Outside stood the Optus, his arms folded, his face sunk in gloom. Captain Franco walked leisurely down the gangplank, grinning.

“What’s the matter?” he said. “You’re getting paid for all this.”

The Optus said nothing. He turned away, collecting his robes. The Captain put his boot on the hem of the robe.

“Just a minute. Don’t go off. I’m not finished.”

“Oh?” The Optus turned with dignity. “I am going back to the village.” He looked toward the animals and birds being driven up the gangplank into the spaceship. “I must organize new hunts.”

Franco lit a cigarette. “Why not? You people can go out into the veldt and track it all down again. But when we run out halfway between Mars and Earth—”

The Optus went off, wordless. Franco joined the first mate at the bottom of the gangplank.

“How’s it coming?” he said. He looked at his watch. “We got a good bargain here.”

The mate glanced at him sourly. “How do you explain that?”

“What’s the matter with you? We need it more than they do.”

“I’ll see you later, Captain.” The mate threaded his way up the plank, between the long-legged Martian go-birds, into the ship. Franco watched him disappear. He was just starting up after him, up the plank toward the port, when he saw *it*.

“My God!” He stood staring, his hands on his hips. Peterson was walking along the path, his face red, leading *it* by a string.

“I’m sorry, Captain,” he said, tugging at the string. Franco walked toward him.

“What is it?”

The wub stood sagging, its great body settling slowly. It was sitting down, its eyes half shut. A few flies buzzed about its flank, and it switched its tail.

It sat. There was silence.

“It’s a wub,” Peterson said. “I got it from a native for fifty cents. He said it was a very unusual animal. Very respected.”

“This?” Franco poked the great sloping side of the wub. “It’s a pig! A huge dirty pig!”

“Yes sir, it’s a pig. The natives call it a wub.”

“A huge pig. It must weigh four hundred pounds.” Franco grabbed a tuft of the rough hair. The wub gasped. Its eyes opened, small and moist. Then its great mouth twitched.

A tear rolled down the wub’s cheek and splashed on the floor.

“Maybe it’s good to eat,” Peterson said nervously.

“We’ll soon find out,” Franco said.

The wub survived the take-off, sound asleep in the hold of the ship. When they were out in space and everything was running smoothly, Captain Franco bade his men fetch the wub upstairs so that he might perceive what manner of beast it was.

The wub grunted and wheezed, squeezing up the passageway.

“Come on,” Jones grated, pulling at the rope. The wub twisted, rubbing its skin off on the smooth chrome walls. It burst into the ante-room, tumbling down in a heap. The men leaped up.

“Good Lord,” French said. “What is it?”

“Peterson says it’s a wub,” Jones said. “It belongs to him.” He kicked at the wub. The wub stood up unsteadily, panting.

“What’s the matter with it?” French came over. “Is it going to be sick?”

They watched. The wub rolled its eyes mournfully. It

gazed around at the men.

“I think it’s thirsty,” Peterson said. He went to get some water. French shook his head.

“No wonder we had so much trouble taking off. I had to reset all my ballast calculations.”

Peterson came back with the water. The wub began to lap gratefully, splashing the men.



Captain Franco appeared at the door.

“Let’s have a look at it.” He advanced, squinting critically. “You got this for fifty cents?”

“Yes, sir,” Peterson said. “It eats almost anything. I fed it on grain and it liked that. And then potatoes, and mash, and scraps from the table, and milk. It seems to enjoy eating. After

it eats it lies down and goes to sleep.”

“I see,” Captain Franco said. “Now, as to its taste. That’s the real question. I doubt if there’s much point in fattening it up any more. It seems fat enough to me already. Where’s the cook? I want him here. I want to find out—”

The wub stopped lapping and looked up at the Captain.

“Really, Captain,” the wub said. “I suggest we talk of other matters.”

The room was silent.

“What was that?” Franco said. “Just now.”

“The wub, sir,” Peterson said. “It spoke.”

They all looked at the wub.

“What did it say? What did it say?”

“It suggested we talk about other things.”

Franco walked toward the wub. He went all around it, examining it from every side. Then he came back over and stood with the men.

“I wonder if there’s a native inside it,” he said thoughtfully. “Maybe we should open it up and have a look.”

“Oh, goodness!” the wub cried. “Is that all you people can think of, killing and cutting?”

Franco clenched his fists. “Come out of there! Whoever you are, come out!”

Nothing stirred. The men stood together, their faces blank, staring at the wub. The wub swished its tail. It belched suddenly.

“I beg your pardon,” the wub said.

“I don’t think there’s anyone in there,” Jones said in a low voice. They all looked at each other.

The cook came in.

“You wanted me, Captain?” he said. “What’s this thing?”

“This is a wub,” Franco said. “It’s to be eaten. Will you measure it and figure out—”

“I think we should have a talk,” the wub said. “I’d like to discuss this with you, Captain, if I might. I can see that you

and I do not agree on some basic issues.”

The Captain took a long time to answer. The wub waited good-naturedly, licking the water from its jowls.

“Come into my office,” the Captain said at last. He turned and walked out of the room. The wub rose and padded after him. The men watched it go out. They heard it climbing the stairs.

“I wonder what the outcome will be,” the cook said. “Well, I’ll be in the kitchen. Let me know as soon as you hear.”

“Sure,” Jones said. “Sure.”

The wub eased itself down in the corner with a sigh. “You must forgive me,” it said. “I’m afraid I’m addicted to various forms of relaxation. When one is as large as I—”

The Captain nodded impatiently. He sat down at his desk and folded his hands.

“All right,” he said. “Let’s get started. You’re a wub? Is that correct?”

The wub shrugged. “I suppose so. That’s what they call us, the natives, I mean. We have our own term.”

“And you speak English? You’ve been in contact with Earthmen before?”

“No.”

“Then how do you do it?”

“Speak English? Am I speaking English? I’m not conscious of speaking anything in particular. I examined your mind—”

“My mind?”

“I studied the contents, especially the semantic warehouse, as I refer to it—”

“I see,” the Captain said. “Telepathy. Of course.”

“We are a very old race,” the wub said. “Very old and very ponderous. It is difficult for us to move around. You can appreciate that anything so slow and heavy would be at the mercy of more agile forms of life. There was no use in our relying on physical defenses. How could we win? Too heavy to run, too soft to fight, too good-natured to hunt for game—”

“How do you live?”

“Plants. Vegetables. We can eat almost anything. We’re very catholic. Tolerant, eclectic, catholic. We live and let live. That’s how we’ve gotten along.”

The wub eyed the Captain.

“And that’s why I so violently objected to this business about having me boiled. I could see the image in your mind—most of me in the frozen food locker, some of me in the kettle, a bit for your pet cat—”

“So you read minds?” the Captain said. “How interesting. Anything else? I mean, what else can you do along those lines?”

“A few odds and ends,” the wub said absently, staring around the room. “A nice apartment you have here, Captain. You keep it quite neat. I respect life-forms that are tidy. Some Martian birds are quite tidy. They throw things out of their nests and sweep them—”

“Indeed.” The Captain nodded. “But to get back to the problem—”

“Quite so. You spoke of dining on me. The taste, I am told, is good. A little fatty, but tender. But how can any lasting contact be established between your people and mine if you resort to such barbaric attitudes? Eat me? Rather you should discuss questions with me, philosophy, the arts—”

The Captain stood up. “Philosophy. It might interest you to know that we will be hard put to find something to eat for the next month. An unfortunate spoilage—”

“I know.” The wub nodded. “But wouldn’t it be more in accord with your principles of democracy if we all drew straws, or something along that line? After all, democracy is to protect the minority from just such infringements. Now, if each of us casts one vote—”

The Captain walked to the door.

“Nuts to you,” he said. He opened the door. He opened his mouth.

He stood frozen, his mouth wide, his eyes staring, his

fingers still on the knob.

The wub watched him. Presently it padded out of the room, edging past the Captain. It went down the hall, deep in meditation.

The room was quiet.

“So you see,” the wub said, “we have a common myth. Your mind contains many familiar myth symbols. Ishtar, Odysseus—”

Peterson sat silently, staring at the floor. He shifted in his chair.

“Go on,” he said. “Please go on.”

“I find in your Odysseus a figure common to the mythology of most self-conscious races. As I interpret it, Odysseus wanders as an individual, aware of himself as such. This is the idea of separation, of separation from family and country. The process of individuation.”

“But Odysseus returns to his home.” Peterson looked out the port window, at the stars, endless stars, burning intently in the empty universe. “Finally he goes home.”

“As must all creatures. The moment of separation is a temporary period, a brief journey of the soul. It begins, it ends. The wanderer returns to land and race....”

The door opened. The wub stopped, turning its great head.

Captain Franco came into the room, the men behind him. They hesitated at the door.

“Are you all right?” French said.

“Do you mean me?” Peterson said, surprised. “Why me?”

Franco lowered his gun. “Come over here,” he said to Peterson. “Get up and come here.”

There was silence.

“Go ahead,” the wub said. “It doesn’t matter.”

Peterson stood up. “What for?”

“It’s an order.”

Peterson walked to the door. French caught his arm.

“What’s going on?” Peterson wrenched loose. “What’s the matter with you?”

Captain Franco moved toward the wub. The wub looked up from where it lay in the corner, pressed against the wall.

“It is interesting,” the wub said, “that you are obsessed with the idea of eating me. I wonder why.”

“Get up,” Franco said.

“If you wish.” The wub rose, grunting. “Be patient. It is difficult for me.” It stood, gasping, its tongue lolling foolishly.

“Shoot it now,” French said.

“For God’s sake!” Peterson exclaimed. Jones turned to him quickly, his eyes gray with fear.

“You didn’t see him—like a statue, standing there, his mouth open. If we hadn’t come down, he’d still be there.”

“Who? The Captain?” Peterson stared around. “But he’s all right now.”

They looked at the wub, standing in the middle of the room, its great chest rising and falling.

“Come on,” Franco said. “Out of the way.”

The men pulled aside toward the door.

“You are quite afraid, aren’t you?” the wub said. “Have I done anything to you? I am against the idea of hurting. All I have done is try to protect myself. Can you expect me to rush eagerly to my death? I am a sensible being like yourselves. I was curious to see your ship, learn about you. I suggested to the native—”

The gun jerked.

“See,” Franco said. “I thought so.”

The wub settled down, panting. It put its paw out, pulling its tail around it.

“It is very warm,” the wub said. “I understand that we are close to the jets. Atomic power. You have done many wonderful things with it—technically. Apparently, your scientific hierarchy is not equipped to solve moral, ethical—”

Franco turned to the men, crowding behind him, wide-eyed, silent.

“I’ll do it. You can watch.”

French nodded. “Try to hit the brain. It’s no good for eating. Don’t hit the chest. If the rib cage shatters, we’ll have to pick bones out.”

“Listen,” Peterson said, licking his lips. “Has it done anything? What harm has it done? I’m asking you. And anyhow, it’s still mine. You have no right to shoot it. It doesn’t belong to you.”

Franco raised his gun.

“I’m going out,” Jones said, his face white and sick. “I don’t want to see it.”

“Me, too,” French said. The men straggled out, murmuring. Peterson lingered at the door.

“It was talking to me about myths,” he said. “It wouldn’t hurt anyone.”

He went outside.

Franco walked toward the wub. The wub looked up slowly. It swallowed.

“A very foolish thing,” it said. “I am sorry that you want to do it. There was a parable that your Saviour related—”

It stopped, staring at the gun.

“Can you look me in the eye and do it?” the wub said. “Can you do that?”

The Captain gazed down. “I can look you in the eye,” he said. “Back on the farm we had hogs, dirty razor-back hogs. I can do it.”

Staring down at the wub, into the gleaming, moist eyes, he pressed the trigger.

The taste was excellent.

They sat glumly around the table, some of them hardly eating at all. The only one who seemed to be enjoying himself was Captain Franco.

“More?” he said, looking around. “More? And some wine, perhaps.”

“Not me,” French said. “I think I’ll go back to the chart room.”

“Me, too.” Jones stood up, pushing his chair back. “I’ll see you later.”

The Captain watched them go. Some of the others excused themselves.

“What do you suppose the matter is?” the Captain said. He turned to Peterson. Peterson sat staring down at his plate, at the potatoes, the green peas, and at the thick slab of tender, warm meat.

He opened his mouth. No sound came.

The Captain put his hand on Peterson’s shoulder.

“It is only organic matter, now,” he said. “The life essence is gone.” He ate, spooning up the gravy with some bread. “I, myself, love to eat. It is one of the greatest things that a living creature can enjoy. Eating, resting, meditation, discussing things.”

Peterson nodded. Two more men got up and went out. The Captain drank some water and sighed.

“Well,” he said. “I must say that this was a very enjoyable meal. All the reports I had heard were quite true—the taste of wub. Very fine. But I was prevented from enjoying this pleasure in times past.”

He dabbed at his lips with his napkin and leaned back in his chair. Peterson stared dejectedly at the table.

The Captain watched him intently. He leaned over.

“Come, come,” he said. “Cheer up! Let’s discuss things.”

He smiled.

“As I was saying before I was interrupted, the role of Odysseus in the myths—”

Peterson jerked up, staring.

“To go on,” the Captain said. “Odysseus, as I understand him—”

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STARTLING STORIES

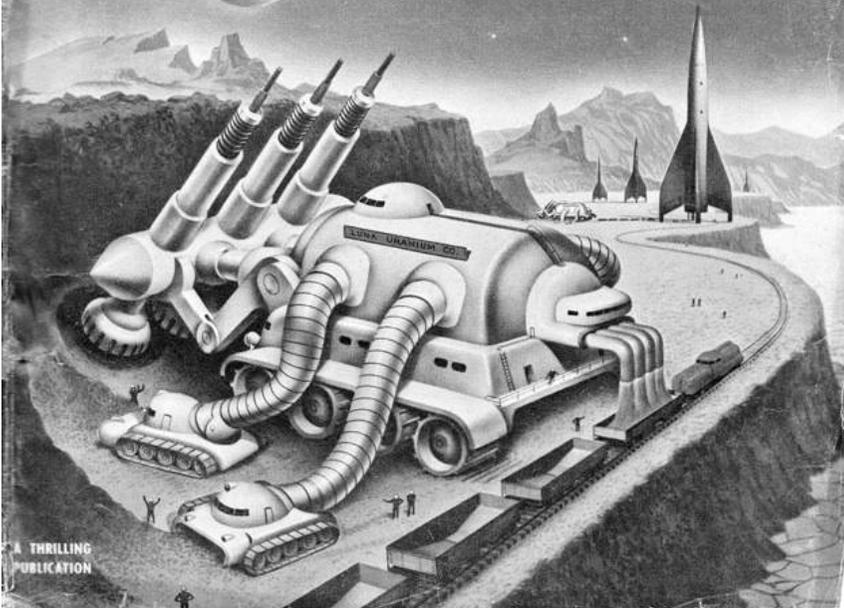
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THE GLORY THAT WAS

A NOVEL OF OLYMPIAN LAUGHTER
By L. SPRAGUE de CAMP

THE LAST DAYS OF SHANDAKOR

A NOVELET OF ANCIENT MARS
By LEIGH BRACKETT



A THRILLING
PUBLICATION

Frank Herbert would be known as one of the greats if his *Dune* series of novels, all of which grace my bookshelf, were the only thing he had written. He was not only a novelist, but a journalist and writer of short stories as well.



Born in 1920, he was nineteen and lied about his age to get a job as a journalist at the *Glendale Star*. He later performed various duties at the *Oregon Statesman*, including journalism and photography.

A photographer for the US Navy Seabees, he was given a medical discharge and attended the University of Washington.

He died in Madison, Wisconsin of a massive pulmonary embolism after pancreatic cancer surgery on February 11, 1986. He was only sixty five years old when he died.

His first two sales were pulp adventure stories. His first science fiction story was published in the April 1952 issue of *Startling Stories*. It is the next story, and is quite different from *Dune* and slightly reminiscent of the movie *The Matrix*.

It is, like some previous stories in this book, exactly as originally published, except that the magazine's page numbers were removed.

Looking for *Something*?



Hypnotist Paul Marcus searched for it, deep in the mind of the blonde. He found it, too . . .

MIRSAR WEES, chief indoctrinator for Sol III sub-prefecture, was defying the intent of the Relaxation-room in his quarters. He buzzed furiously back and forth from metal wall to metal wall, his pedal-membrane making a cricket-like sound as the vacuum cups disengaged.

"The fools!" he thought. "The stupid, incompetent, mindless fools!"

Mirsar Wees was a Denebian. His race had originated more than three million earth years ago on the fourth

planet circling the star Deneb—a planet no longer existing. His profile was curiously similar to that of a tall woman in a floor-length dress, with the vacuum-cup pedal-membrane contacting the floor under the "skirt." His eight specialized extensors waved now in a typical Denebian rage-pattern. His mouth, a thin transverse slit entirely separate from the olfactory-lung orifice directly below it, spewed forth a multi-lingual stream of invective against the assistant who cowered before him.

● **By FRANK HERBERT** ●

LOOKING FOR SOMETHING?

"How did this happen?" he shouted. "I take my first vacation in one hundred years and come back to find my career almost shattered by your incompetency!"

Mirsar Wees turned and buzzed back across the room. Through his visioning, an organ somewhat like a glittering white tricycle-tire jammed down about one-third of the distance over his head, he examined again the report on Earthling Paul Marcus and maintained a baleful stare upon his assistant behind him. Activating the vision cells at his left, he examined the wall chronometer.

"So little time," he muttered. "If only I had someone at Central Processing who could see a deviant when it comes by! Now I'll have to take care of this bumble myself, before it gets out of hand. If they hear of it back at the bureau . . ."

Mirsar Wees, the Denebian, a cog in the galaxy-wide korad-farming empire of his race, pivoted on his pedal-membrane and went out a door which opened soundlessly before him. The humans who saw his flame-like profile this night would keep alive the folk tales of ghosts, djinn, little people, fairies, elves, pixies . . .

Were they given the vision to see it, they would know also that an angry overseer had passed. But they would not see this, of course. That was part of Mirsar Wees' job.

IT WAS mainly because Paul Marcus was a professional hypnotist that he obtained an aborted glimpse of the rulers of the world.

The night it happened he was inducing a post-hypnotic command into the mind of an audience-participant to his show on the stage of the Roxy Theater in Tacoma, Washington.

Paul was a tall, thin man with a wide head which appeared large because of this feature although it really was not. He wore a black tailcoat and for-

mal trousers, jewelled cuff links and chalkwhite cuffs, which gleamed and flashed as he gestured. A red spotlight in the balcony gave a Mephisto caste to his stage-setting, which was dominated by a backdrop of satin black against which gleamed two giant, luminous eyes. He was billed as "Marcus the Mystic" and he looked the part.

The subject was a blonde girl whom Paul had chosen because she displayed signs of a higher than ordinary intelligence, a general characteristic of persons who are easily hypnotized. The woman had a good figure and showed sufficient leg when she sat down on the chair to excite whistles and cat-calls from the front rows. She flushed, but maintained her composure.

"What is your name, please?" Paul asked.

She answered in a contralto voice, "Madelyne Walker."

"Miss or Mrs.?"

She said, "Miss."

Paul held up his right hand. From it dangled a gold chain on the end of which was a large paste gem with many facets cut into its surface. A spotlight in the wings was so directed that it reflected countless star-bursts from the gem.

"If you will look at the diamond," Paul said. "Just keep your eyes on it."

He began to swing the gem rhythmically, like a pendulum, from side to side. The girl's eyes followed it. Paul waited until her eyes were moving in rhythm with the swinging bauble before he began to recite in a slow monotone, timed to the pendulum:

"Sleep. You will fall asleep . . . deep sleep . . . deep sleep . . . asleep . . . deep asleep . . . asleep . . . asleep . . ."

Her eyes followed the gem.

"Your eyelids will become heavy," Paul said. "Sleep. Go to sleep. You are falling asleep . . . deep, restful sleep . . . healing sleep . . . deep asleep . . . asleep . . . asleep . . . asleep . . ."

STARTLING STORIES

HER head began to nod, eyelids to close and pop open, slower and slower. Paul gently moved his left hand up to the chain. In the same monotone he said, "When the diamond stops swinging you will fall into a deep, restful sleep from which only I can awaken you." He allowed the gem to swing slower and slower in shorter and shorter sweeps. Finally, he put both palms against the chain and rotated it. The bauble at the end of the chain began to whirl rapidly, its facets coruscating with the reflections of the spotlight.

Miss Walker's head fell forward and Paul kept her from falling off the chair by grasping her shoulder. She was in deep trance. He began demonstrating to the audience the classic symptoms which accompany this—insensitivity to pain, body rigidity, complete obedience to the hypnotist's voice.

The show went along in routine fashion. Miss Walker barked like a dog. She became the dowager queen with dignified mein. She refused to answer to her own name. She conducted the imaginary symphony orchestra. She sang an operatic aria.

The audience applauded at the correct places in the performance. Paul bowed. He had his subject deliver a wooden bow, too. He wound up to the finale.

"When I snap my fingers you will awaken," he said. "You will feel completely refreshed as though after a sound sleep. Ten seconds after you awaken you will imagine yourself on a crowded streetcar where no one will give you a seat. You will be extremely tired. Finally, you will ask the fat man opposite you to give you his seat. He will do so and you will sit down. Do you understand?"

Miss Walker nodded her head.

"You will remember nothing of this when you awaken," Paul said.

He raised his hand to snap his fingers . . .

It was then that Paul Marcus received his mind-jarring idea. He held his hand up, fingers ready to snap, thinking about this idea, until he heard the audience stirring restlessly behind him. Then he shook his head and snapped his fingers.

Miss Walker awakened slowly, looked around, got up, and exactly ten seconds later began the streetcar hallucinations. She performed exactly as commanded, again awakened, and descended confusedly from the stage to more applause and whistles.

It should have been gratifying. But from the moment he received *the* idea, the performance could have involved someone other than Paul Marcus for all of the attention he gave it. Habit carried him through the closing routine, the brief comments on the powers of hypnotism, the curtain calls. Then he walked back to his dressing room slowly, preoccupied, unbuttoning his studs on the way as he always did following the last performance of the night. The concrete cave below stage echoed to his footsteps.

IN THE dressing room he removed the tailcoat and hung it in the wardrobe. Then he sat down before the dressing table mirror and began to cream his face preparatory to removing the light makeup he wore. He found it hard to meet his own eyes in the mirror.

"This is silly," he told himself sourly.

A knock sounded at the door. Without turning, he said, "Come in."

The door opened hesitantly and the blonde Miss Walker stepped into the room.

"Excuse me," she said. "The man at the door said you were in here and . . ."

Seeing her in the mirror, Paul turned around and stood up.

"Is something wrong?" he asked.

Miss Walker looked around her as though to make sure they were alone before she answered.

"Not exactly," she said.

LOOKING FOR SOMETHING?

Paul gestured to a settee beside his dressing table. "Sit down, won't you?" he asked. He returned to the dressing table as Miss Walker seated herself.

"You'll excuse me if I go on with this chore," he said, taking a tissue to the grease paint under his chin.

Miss Walker smiled. "You remind me of a woman at her nightly beauty care," she said.

Paul thought: Another stage-struck miss, and the performance gives her the excuse to take up my time. He glanced at the girl out of the corners of his eyes. "Not bad, though . . ."

"You haven't told me to what I owe the pleasure of your company," he said.

Miss Walker's face clouded with thought.

"It's really very silly," she said.

Probably, Paul thought.

"Not at all," he said. "Tell me what's on your mind."

"Well, it's an idea I had while my friends were telling me what I did on the stage," she said. She grinned wryly. "I had the hardest time believing that there actually wasn't a streetcar up there. I'm still not absolutely convinced. Maybe you brought in a dummy streetcar with a lot of actors. Oh, I don't know!" She shook her head and put a hand to her eyes.

The way she said, "I don't know!" reminded Paul of his own idea; *the idea*. He decided to give Miss Walker the fast brush-off in order to devote more time to thinking this new idea through to some logical conclusion.

"What about the streetcar?" he asked.

THE girl's face assumed a worried expression. "I thought I was on a real streetcar," she said. "There was no audience, no . . . hypnotist. Nothing. Just the reality of riding the streetcar and being tired like you are after a hard day's work. I saw the people on the car. I smelled them. I felt the car under my feet. I heard the money

bounce in the coin-catcher and all the other noises one hears on a streetcar—people talking, a man opening his newspaper. I saw the fat man sitting there in front of me. I asked him for his seat. I even felt embarrassed. I heard him answer and I sat down in his seat. It was warm and I felt the people pressing against me on both sides. It was very real."

"And what bothers you?" Paul asked.

She looked up from her hands which were tightly clasped in her lap.

"That bothers me," she said. "That streetcar. It was real. It was as real as anything I've ever known. It was as real as now. I believed in it. Now I'm told it wasn't real." Again she looked down at her hands. "What am I to believe?"

This is getting close to *the idea*, Paul thought.

"Can you express what bothers you in any other way?" he asked.

She looked him squarely in the eyes. "Yes," she said. "I got to thinking while my friends were talking to me. I got to wondering. What if all this—" she gestured around her—"our whole lives, our world, everything we see, feel, hear, smell, or sense in any way is more of the same. A hypnotic delusion!"

"Precisely!" Paul exhaled the word.

"What did you say?" she asked.

"I said, 'Precisely!'"

Her brows drew together. "Why?"

Paul turned toward her and rested his left elbow on the dressing table. "Because," he said, "at the very moment I was telling you what you would do when you awakened, at the moment I was giving you the commands which resulted in your hallucination, I got the same idea."

"My goodness!" she said. The very mildness of her exclamation made it seem more vehement than if she had sworn.

Paul turned back to the dressing table mirror. "I wonder if there could be something in telepathy as well?"

STARTLING STORIES

Miss Walker looked at him in the mirror, the room seeming to draw in closely behind her. "It was an idea I couldn't keep to myself," she said. "I told my friends—I came with a married couple—but they just laughed at me. I decided on the spur of the moment to come back here and talk to you and I did it before I could lose my nerve. After all, you're a hypnotist. You should know something about this."

"It'll take some looking into," Paul said, "I wonder . . ." He turned toward Miss Walker. "Are you engaged to-night?"

HER expression changed. She looked at him as though her mother were whispering in her ear: "Watch out! Watch out! He's a man."

"Well, I don't know . . ." she said.

Paul put on his most winning smile. "I'm no backstage wolf," he said. "Please. I feel as though somebody had asked me to cut the Gordian knot, and I'd rather untie it—but I need help."

"What could we do?" she asked.

It was Paul's turn to hesitate. "There are several ways to approach the problem," he said. "We in America have only scratched the surface in our study of hypnotism." He doubled up his fist and thudded it gently on the dressing table. "Hell! I've seen witch doctors in Haiti who know more about it than I do. But . . ."

"What would you do first?" she asked.

"I'd . . . I'd . . ." Paul looked at her for a moment as though he really saw her for the first time. "I'd do this," he said. "Make yourself comfortable on that settee. Lean back. That's it."

"What are you going to do?" she asked.

"Well," Paul said, "it's pretty well established that these sensory hallucinations are centered in one part of the human nervous system which is laid bare by hypnotism. It's possible, by

using hypnotism, to get at the commands other hypnotists have put there. I'm going to put you back in deep trance and let you search for the commands yourself. If something is commanding us to live an illusion, the command should be right there with all the others."

"I don't know," she said.

"Please," Paul urged. "We might be able to crack this thing right here and now in just a few minutes."

"All right." She still sounded hesitant, but she leaned back as directed.

Paul lifted his paste gem from the dressing table and focused the table spotlight on it. "Look at the diamond," he said. . . .

This time she fell into the trance more readily. Paul checked her for pain threshold, muscular control. She responded appropriately. He began questioning:

"Do you hear my voice?"

"Yes," she said.

"Do you know what hypnotic commands are in your mind?" he asked.

There was a long pause. Her lips opened dryly. "There are . . . commands," she said.

"Do you obey them?" he asked.

"I must."

"What is the most basic of these commands?" he asked.

"I . . . can . . . not . . . tell."

Paul almost rubbed his hands. A simple 'Don't talk about it,' he thought.

"Just nod your head if I repeat the command," he said. "Does it say, 'You must not tell'?"

Her head nodded.

Paul rubbed his hands against his pants legs and realized suddenly that he was perspiring excessively.

"What is it you must not tell?" he asked.

She shook her head without speaking.

"You must tell me," he said. "If you do not tell me, your right foot will begin to burn and itch unbearably and will continue to do so until you do tell

LOOKING FOR SOMETHING?

me. Tell me what it is that you have been commanded not to tell."

Again she shook her head. She reached down and began to scratch her right foot. She pulled off her shoe.

"You must tell me," Paul said "What is the first word of the command?"

The girl looked up at him, but her eyes remained unfocused.

"You . . ." she said.

It was as though she had brought the word from some dark place deep within her and the saying of it was almost too much to bear. She continued to scratch her right leg.

"What is the second word?" Paul asked.

She tried to speak, but failed.

"Is it 'must'?" he asked. "Nod your head if it is."

She nodded her head.

"You 'must' what?"

Again she was wordless.

He thought about it for a moment. "Sensory perception," he thought. He leaned forward. "Is it 'You must sense . . .?'" he asked. "Is it 'You must sense only . . .?'"

She relaxed. Her head nodded and she said, "Yes."

Paul took a deep breath.

"What is it 'You must sense only . . .?'" he asked.

She opened her mouth, her lips moved, but no sound issued.

He felt like screaming at her, dragging the answer from her mind with his hands.

"What is it?" His voice cracked on the question. "Tell me!"

She shook her head from side to side. He noticed signs of awakening.

Again he took a deep breath. "What will happen to you if you tell me?"

"I'll die," she said.

He leaned forward and lowered his voice to a confidential tone. "That is foolishness," he said. "You can't die just because you say a few words. You know that. Now tell me what it is that you have been ordered to sense."

She stared straight ahead of her at nothing, mouth open. Paul lowered his head to look directly into her eyes. "Do you see me?" he asked.

"No," she said.

"What do you see?" he asked.

"I see death."

"Look at me instead," Paul said. "You remember me."

"You are death," she said.

"That's nonsense! Look at me," he commanded.

Her eyes opened wider. Paul stared into them. Her eyes seemed to grow and grow and grow and grow . . . Paul found himself unable to look away. There was nothing else in the world except two blue-gray eyes. A deep, resonant voice, like a low-register cello, filled his mind.

"You will forget everything that has happened tonight," it said. "You will die rather than remember. You will, you *must*, sense only those things which you have been commanded to sense. I, _____, command it. Do you remember me?"

Paul's lips formed the word, "yes".

"Who am I?" the voice asked.

Paul dampened his dry lips with his tongue. "You are death," he said.

BUREAUCRACY has a kind of timeless, raceless mold which makes its communiques recognizable as to type by the members of any bureau anywhere. The multiple copies, the precise wording to cover devious intent, the absolute protocol of address—all are of a pattern, whether the communication is to the Reconstruction Finance Corporation or the Denebian Bureau of Indoctrination.

Mirsar Wees knew the pattern as another instinct. He had been supervisor of indoctrination and overseer of the korad farming on Sol III for one hundred and fifty-seven of the planet's years. In that time, by faithfully following the letter of the Indoctrination Bureau's code and never an individual

STARTLING STORIES

interpretation of its spirit, he had insured for himself a promotion to Coordinator of the entire Sol prefecture whenever such an opening occurred.

Having met another threat to his position and resolved it, knowing the security of his tenure, he sat before the mechanical secretary-transmitter in his office and dictated a letter to the Bureau. The vision-ring around his head glowed a dull amber as he relaxed the receptors in it. His body stretched out comfortably, taking a gentle massage from the chair.

"There has been considerable carelessness lately with the training of neo-indoctrinators," he said into the commo-tube.

Let a few heads fall at the bureau, he thought.

"There seems to be a feeling that, because we of the Sol prefecture are dealing with lesser beings, a lesser amount of care need be taken with the prefecture's indoctrinators. I have just dealt with a first-order threat to the Sol III korad supply, a threat which was directly attributable to neo-indoctrinator carelessness. A deviant was allowed to pass through the hands of three of our latest acquisitions from the College of Indoctrinators. These indoctrinators have been sent back for retraining."

HE THOUGHT in satisfaction: They will reflect that the korad secreted by the glands of our charges is necessary for their own immortality, and will be more severe at the training center because of that. And pensively: It is almost time for me to tell them of our breeding experiments to bring the korad glands to the exterior of these creatures, making more frequent draining possible. They will particularly appreciate the niceties of indoctrination — increasing the mating pattern, increasing individual peril and, thereby, the longevity gland secretion, and the more strict visual limitation to keep the creatures from discovering the change. . . .

"I am sending a complete visio-corder report on how I met this threat," he spoke into the tube. "Briefly, I insinuated myself into the earth-being's presence and installed a more severe command. Standard procedure. It was not deemed practical to eliminate the creature because of the latest interpretations on command interference; it was felt that the being's elimination might set off further thought-patterns inimical to our designs.

"The creature was, therefore, commanded to mate with another of its ilk who is more stringently under our control. The creature also was removed from any labor involving the higher nerve-centers and has been put to another task, that of operating a transportation device called a streetcar.

"The mate has been subjected to the amputation of an appendage. Unfortunately, before I could take action, the creature I treated had started along an exceedingly clever line of action and had installed irremovable commands which made the appendage useless."

They will see how much of a deviant the creature was, he thought, and how careless the new indoctrinators were.

"The indoctrinator service must keep in mind at all times what happened to create the Sol planetoid belt. Those bodies, as we all know, once were the planet Dirad, the greatest korad source in the entire galaxy. Slipshod procedure employed by indoctrinators set up a situation similar to the one I have just nipped, and we were forced to destroy the entire planet. The potency of minds which have slipped from our control should be kept constantly before our attention. Dirad is an object lesson.

"The situation here is again completely normal, of course, and the korad supply is safe. We can go on draining the immortality of others—but *only as long as we maintain constant vigilance.*"

He signed it, "Cordially Mirsar Wees, Chief Indoctrinator, Sol Sub-prefecture."

LOOKING FOR SOMETHING?

Someday, he thought, it will be "Coordinator."

Rising from the mechano-secretary, Mirsar Wees moved over to the "incoming" tube of his report-panel and noticed a tube which his new assistant had tabbed with the yellow band of "extreme importance."

He inserted the tube into a translator, sat down, and watched as it dealt out the report:

"A Hindu creature has seen itself as it really is," the report said.

Mirsar Wees reached over and put

a tracer-beam on his new assistant to observe how that worthy was meeting this threat.

The report buzzed on: "The creature went insane as per indoctrination command, but most unfortunately it is a member of a sect which worships insanity. Others are beginning to listen to its babblings."

The report concluded: "I make haste."

Mirsar Wees leaned back, relaxed and smiled blandly. The new assistant showed promise.



Story illustrated by Paul Orban



I have a lot of science fiction anthologies on my bookshelves, and quite a few contain stories by James Blish. It's no wonder – this guy could write, as you will see reading the following story.

Born in East Orange, New Jersey on May 23, 1921, he studied biology at Rutgers and Columbia University and was a medical technician in WWII. After the war he was a science editor, employed by Pfizer pharmaceuticals.

His first published story was *Emergency Refueling* in the March 1940 edition of Frederik Pohl's magazine *Super Science Stories*. When his writing career was well enough along, he started writing full time.

James Blish is credited with coining the term “gas giant” in his story *Solar Plexus*. He is winner of both the Hugo and Nebula awards.

The *Encyclopedia of Science Fiction* says of him, “As a writer, Blish was thrifty – to the point of parsimony in his later years.” The *Encyclopedia Britannica* says “His work, which often examined philosophical ideas, was part of the more sophisticated science fiction that arose in the 1950s.”

He wrote serious literary criticism of science fiction, sometimes scathing criticism, critiquing it as “serious” literature under the name William Atheling, Jr. He was harshly critical of both bad science and bad grammar in science fiction, and harsh with editors who accepted such works.

He moved to England in 1969.

Late in his life he wrote novels based on the “*Star Trek* universe” with the blessing of Paramount, who owns the trademarks.

A member of the tobacco institute, he died on July 30, 1975 at age 54, of lung cancer.

The Thing in the Attic

James Blish

It is written that after the Giants came to Tellura from the far stars, they abode a while, and looked upon the surface of the land, and found it wanting, and of evil omen. Therefore did they make men to live always in the air and in the sunlight, and in the light of the stars, that he would be reminded of them. And the Giants abode yet a while, and taught men to speak, and to write, and to weave, and to do many things which are needful to do, of which the writings speak. And thereafter they departed to the far stars, saying, Take this world as your own, and though we shall return, fear not, for it is yours.

—THE BOOK OF LAWS

Honath and his fellow arch-doubters did not believe in the Giants, and for this they were cast into Hell. And when survival depended upon unwavering faith in their beliefs, they saw that there were Giants, after all...

Honath the Pursemaker was hauled from the nets an hour before the rest of the prisoners, as befitted his role as the arch-doubter of them all. It was not yet dawn, but his captors led him in great bounds through the endless, musky-perfumed orchid gardens, small dark shapes with crooked legs, hunched shoulders, slim hairless tails carried, like his, in concentric spirals wound clockwise. Behind them sprang Honath on the end of a long tether, timing his leaps by theirs, since any slip would hang him summarily.

He would of course be on his way to the surface, some 250 feet below the orchid gardens, shortly after dawn in any event. But not even the arch-doubter of them all wanted to begin the trip—not even at the merciful snap-spine end of a tether—a moment before the law said, Go.

The looping, interwoven network of vines beneath them, each cable as thick through as a man's body, bellied out and down sharply as the leapers reached the edge of the fern-

tree forest which surrounded the copse of fan-palms. The whole party stopped before beginning the descent and looked eastward, across the dim bowl. The stars were paling more and more rapidly; only the bright constellation of the Parrot could still be picked out without doubt.

“A fine day,” one of the guards said, conversationally. “Better to go below on a sunny day than in the rain, purse-maker.”

Honath shuddered and said nothing. Of course it was always raining down below in Hell, that much could be seen by a child. Even on sunny days, the endless pinpoint rain of transpiration, from the hundred million leaves of the eternal trees, hazed the forest air and soaked the black bog forever.

He looked around in the brightening, misty morning. The eastern horizon was black against the limb of the great red sun, which had already risen about a third of its diameter; it was almost time for the small, blue-white, furiously hot consort to follow. All the way to that brink, as to every other horizon, the woven ocean of the treetops flowed gently in long, un-breaking waves, featureless as some smooth oil. Only nearby could the eye break that ocean into its details, into the world as it was: a great, many-tiered network, thickly overgrown with small ferns, with air-drinking orchids, with a thousand varieties of fungi sprouting wherever vine crossed vine and collected a little humus for them, with the vivid parasites sucking sap from the vines, the trees, and even each other. In the ponds of rain-water collected by the closely fitting leaves of the bromeliads tree-toads and peepers stopped down their hoarse songs dubiously as the light grew and fell silent one by one. In the trees below the world, the tentative morning screeches of the lizard-birds—the souls of the damned, or the devils who hunted them, no one was quite sure which—took up the concert.

A small gust of wind whipped out of the hollow above the glade of fan-palms, making the network under the party shift slightly, as if in a loom. Honath gave with it easily, auto-

matically, but one of the smaller vines toward which he had moved one furless hand hissed at him and went pouring away into the darkness beneath—a chlorophyll-green snake, come up out of the dripping aerial pathways in which it hunted in ancestral gloom, to greet the suns and dry its scales in the quiet morning. Farther below, an astonished monkey, routed out of its bed by the disgusted serpent, sprang into another tree, reeling off ten mortal insults, one after the other, while still in mid-leap. The snake, of course, paid no attention, since it did not speak the language of men; but the party on the edge of the glade of fan-palms snickered appreciatively.

“Bad language they favor below,” another of the guards said. “A fit place for you and your blasphemers, purse-maker. Come now.”

The tether at Honath’s neck twitched, and then his captors were soaring in zig-zag bounds down into the hollow toward the Judgment Seat. He followed, since he had no choice, the tether threatening constantly to foul his arms, legs or tail, and—worse, far worse—making his every mortifying movement ungraceful. Above, the Parrot’s starry plumes flickered and faded into the general blue.

Toward the center of the saucer above the grove, the stitched leaf-and-leather houses clustered thickly, bound to the vines themselves, or hanging from an occasional branch too high or too slender to bear the vines. Many of these purses Honath knew well, not only as visitor but as artisan. The finest of them, the inverted flowers which opened automatically as the morning dew bathed them, yet which could be closed tightly and safely around their occupants at dusk by a single draw-string, were his own design as well as his own handiwork. They had been widely admired and imitated.

The reputation that they had given him, too, had helped to bring him to the end of the snap-spine tether. They had given weight to his words among others—weight enough to make him, at last, the arch-doubter, the man who leads the young into blasphemy, the man who questions the Book of Laws.

And they had probably helped to win him his passage on the Elevator to Hell.

The purses were already opening as the party swung among them. Here and there, sleepy faces blinked out from amid the exfoliating sections, criss-crossed by relaxing lengths of dew-soaked rawhide. Some of the awakening householders recognized Honath, of that he was sure, but none came out to follow the party—though the villagers should be beginning to drop from the hearts of their stitched flowers like ripe seed-pods by this hour of any normal day.

A Judgment was at hand, and they knew it—and even those who had slept the night in one of Honath's finest houses would not speak for him now. Everyone knew, after all, that Honath did not believe in the Giants.

Honath could see the Judgment Seat itself now, a slung chair of woven cane crowned along the back with a row of gigantic mottled orchids. These had supposedly been transplanted there when the chair was made, but no one could remember how old they were; since there were no seasons, there was no particular reason why they should not have been there forever. The Seat itself was at the back of the arena and high above it, but in the gathering light Honath could make out the white-furred face of the Tribal Spokesman, like a lone silver-and-black pansy among the huge vivid blooms.

At the center of the arena proper was the Elevator itself. Honath had seen it often enough, and had himself witnessed Judgments where it was called into use, but he could still hardly believe that he was almost surely to be its next passenger. It consisted of nothing more than a large basket, deep enough so that one would have to leap out of it, and rimmed with thorns to prevent one from leaping back in. Three hempen ropes were tied to its rim, and were then cunningly interwound on a single-drum windlass of wood, which could be turned by two men even when the basket was loaded.

The procedure was equally simple. The condemned man was forced into the basket, and the basket lowered out of sight,

until the slackening of the ropes indicated that it had touched the surface. The victim climbed out—and if he did not, the basket remained below until he starved or until Hell otherwise took care of its own—and the windlass was rewound.

The sentences were for varying periods of time, according to the severity of the crime, but in practical terms this formality was empty. Although the basket was dutifully lowered when the sentence had expired, no one had ever been known to get back into it. Of course, in a world without seasons or moons, and hence without any but an arbitrary year, long periods of time are not easy to count accurately. The basket could arrive thirty or forty days to one side or the other of the proper date. But this was only a technicality, however, for if keeping time was difficult in the attic world it was probably impossible in Hell.

Honath's guards tied the free end of his tether to a branch and settled down around him. One abstractedly passed a pine cone to him and he tried to occupy his mind with the business of picking the juicy seeds from it, but somehow they had no flavor.

More captives were being brought in now, while the Spokesman watched with glittering black eyes from his high perch. There was Mathild the Forager, shivering as if with ague, the fur down her left side glistening and spiky, as though she had inadvertently overturned a tank plant on herself. After her was brought Alaskon the Navigator, a middle-aged man only a few years younger than Honath himself; he was tied up next to Honath, where he settled down at once, chewing at a joint of cane with apparent indifference.

Thus far, the gathering had proceeded without more than a few words being spoken, but that ended when the guards tried to bring Seth the Needlesmith from the nets. He could be heard at once, over the entire distance to the glade, alternately chattering and shrieking in a mixture of tones that might mean either fear or fury. Everyone in the glade but Alaskon turned to look, and heads emerged from purses like

new butterflies from cocoons.

A moment later, Seth's guards came over the lip of the glade in a tangled group, now shouting themselves. Somewhere in the middle of the knot Seth's voice became still louder; obviously he was clinging with all five members to any vine or frond he could grasp, and was no sooner pried loose from one than he would leap by main force, backwards if possible, to another. Nevertheless he was being brought inexorably down into the arena, two feet forward, one foot back, three feet forward....

Honath's guards resumed picking their pine-cones. During the disturbance, Honath realized Charl the Reader had been brought in quietly from the same side of the glade. He now sat opposite Alaskon, looking apathetically down at the vine-web, his shoulders hunched forward. He exuded despair; even to look at him made Honath feel a renewed shudder.

From the High Seat, the Spokesman said: "Honath the Pursemaker, Alaskon the Navigator, Charl the Reader, Seth the Needlesmith Mathild the Forager, you are called to answer to justice."

"Justice!" Seth shouted, springing free of his captors with a tremendous bound and bringing up with a jerk on the end of his tether. "This is no justice! I have nothing to do with —"

The guards caught up with him and clamped brown hands firmly over his mouth. The Spokesman watched with amused malice.

"The accusations are three," the Spokesman said. "The first, the telling of lies to children. Second, the casting into doubt of the divine order among men. Third, the denial of the Book of Laws. Each of you may speak in order of age. Honath the Pursemaker, your plea may be heard."

Honath stood up, trembling a little, but feeling a surprisingly renewed surge of his old independence.

"Your charges," he said, "all rest upon the denial of the Book of Laws. I have taught nothing else that is contrary to

what we all believe, and called nothing else into doubt. And I deny the charge.”

The Spokesman looked down at him with disbelief. “Many men and women have said that you do not believe in the Giants, purse-maker,” he said. “You will not win mercy by piling up more lies.”

“I deny the charge,” Honath insisted. “I believe in the Book of Laws as a whole, and I believe in the Giants. I have taught only that the Giants were not real in the sense that we are real. I have taught that they were intended as symbols of some higher reality and were not meant to be taken as literal persons.”

“What higher reality is this?” the Spokesman demanded. “Describe it.”

“You ask me to do something the writers of the Book of Laws themselves couldn’t do,” Honath said hotly. “If they had to embody the reality in symbols rather than writing it down directly, how could a mere purse-maker do better?”

“This doctrine is wind,” the Spokesman said. “And it is plainly intended to undercut authority and the order established by the Book. Tell me, purse-maker: if men need not fear the Giants, why should they fear the law?”

“Because they are men, and it is to their interest to fear the law. They aren’t children, who need some physical Giant sitting over them with a whip to make them behave. Furthermore, Spokesman, this archaic belief *itself* undermines us. As long as we believe that there are real Giants, and that some day they’ll return and resume teaching us, so long will we fail to seek answers to our questions for ourselves. Half of what we know was given to us in the Book, and the other half is supposed to drop to us from the skies if we wait long enough. In the meantime, we vegetate.”

“If a part of the Book be untrue, there can be nothing to prevent that it is all untrue,” the Spokesman said heavily. “And we will lose even what you call the half of our knowledge—which is actually the whole of it—to those who see with clear

eyes.”

Suddenly, Honath lost his temper. “Lose it, then!” he shouted. “Let us unlearn everything we know only by rote, go back to the beginning, learn all over again, and *continue* to learn, from our own experience. Spokesman, you are an old man, but there are still some of us who haven’t forgotten what curiosity means!”

“Quiet!” the Spokesman said. “We have heard enough. We call on Alaskon the Navigator.”

“Much of the Book is clearly untrue,” Alaskon said flatly, rising. “As a handbook of small trades it has served us well. As a guide to how the universe is made, it is nonsense, in my opinion; Honath is too kind to it. I’ve made no secret of what I think, and I still think it.”

“And will pay for it,” the Spokesman said, blinking slowly down at Alaskon. “Charl the Reader.”

“Nothing,” Charl said, without standing, or even looking up.

“You do not deny the charges?”

“I’ve nothing to say,” Charl said, but then, abruptly, his head jerked up, and he glared with desperate eyes at the Spokesman. “I can read, Spokesman. I have seen words in the Book of Laws that contradict each other. I’ve pointed them out. They’re facts, they exist on the pages. I’ve taught nothing, told no lies, preached no unbelief. I’ve pointed to the facts. That’s all.”

“Seth the Needlesmith, you may speak now.”

The guards took their hands gratefully off Seth’s mouth; they had been bitten several times in the process of keeping him quiet up to now. Seth resumed shouting at once.

“I’m no part of this group! I’m the victim of gossip, envious neighbors, smiths jealous of my skill and my custom! No man can say worse of me than that I sold needles to this purse-maker—sold them in good faith! The charges against me are lies, all lies!”

Honath jumped to his feet in fury, and then sat down

again, choking back the answering shout almost without tasting its bitterness. What did it matter? Why should he bear witness against the young man? It would not help the others, and if Seth wanted to lie his way out of Hell, he might as well be given the chance.

The Spokesman was looking down at Seth with the identical expression of outraged disbelief which he had first bent upon Honath. "Who was it cut the blasphemies into the hardwood tree, by the house of Hosi the Lawgiver?" he demanded. "Sharp needles were at work there, and there are witnesses to say that your hands held them."

"More lies!"

"Needles found in your house fit the furrows, Seth."

"They were not mine—or they were stolen! I demand to be freed!"

"You will be freed," the Spokesman said coldly. There was no possible doubt as to what he meant. Seth began to weep and to shout at the same time. Hands closed over his mouth again. "Mathild the Forager, your plea may be heard."

The young woman stood up hesitantly. Her fur was nearly dry now, but she was still shivering.

"Spokesman," she said, "I saw the things which Charl the Reader showed me. I doubted, but what Honath said restored my belief. I see no harm in his teachings. They remove doubt, instead of fostering it as you say they do. I see no evil in them, and I don't understand why this is a crime."

Honath looked over to her with new admiration. The Spokesman sighed heavily.

"I am sorry for you," he said, "but as Spokesman we cannot allow ignorance of the law as a plea. We will be merciful to you all, however. Renounce your heresy, affirm your belief in the Book as it is written from bark to bark, and you shall be no more than cast out of the tribe."

"I renounce it!" Seth cried. "I never shared it! It's all blasphemy and every word is a lie! I believe in the Book, all of it!"

“You, needlesmith,” the Spokesman said, “have lied before this Judgment, and are probably lying now. You are not included in the dispensation.”

“Snake-spotted caterpillar! May your—*ummulph*.”

“Pursemaker, what is your answer?”

“It is No,” Honath said stonily. “I’ve spoken the truth. The truth can’t be unsaid.”

The Spokesman looked down at the rest of them. “As for you three, consider your answers carefully. To share the heresy means sharing the sentence. The penalty will not be lightened only because you did not invent the heresy.”

There was a long silence.

Honath swallowed hard. The courage and the faith in that silence made him feel smaller and more helpless than ever. He realized suddenly that the other three would have kept that silence, even without Seth’s defection to stiffen their spines. He wondered if he could have done so.

“Then we pronounce the sentence,” the Spokesman said. “You are one and all condemned to one thousand days in Hell.”

There was a concerted gasp from around the edges of the arena, where, without Honath’s having noticed it before, a silent crowd had gathered. He did not wonder at the sound. The sentence was the longest in the history of the tribe.

Not that it really meant anything. No one had ever come back from as little as one hundred days in Hell. No one had ever come back from Hell at all.

“Unlash the Elevator. All shall go together.”

The basket swayed. The last of the attic world that Honath saw was a circle of faces, not too close to the gap in the vine web, peering down after them. Then the basket fell another few yards to the next turn of the windlass and the faces vanished.

Seth was weeping in the bottom of the Elevator, curled up into a tight ball, the end of his tail wrapped around his nose and eyes. No one else could make a sound, least of Honath.

The gloom closed around them. It seemed extraordinarily still. The occasional harsh screams of a lizard-bird somehow distended the silence without breaking it. The light that filtered down into the long aisles between the trees seemed to be absorbed in a blue-green haze through which the lianas wove their long curved lines. The columns of tree-trunks, the pillars of the world, stood all around them, too distant in the dim light to allow them to gauge their speed of descent. Only the irregular plunges of the basket proved that it was even in motion any longer, though it swayed laterally in a complex, overlapping series of figure-eights.

Then the basket lurched downward once more, brought up short, and tipped sidewise, tumbling them all against the hard cane. Mathild cried out in a thin voice, and Seth uncurled almost instantly, clawing for a handhold. Another lurch, and the Elevator lay down on its side and was still.

They were in Hell.

Cautiously, Honath began to climb out, picking his way over the long thorns on the basket's rim. After a moment, Charl the Reader followed, and then Alaskon took Mathild firmly by the hand and led her out onto the surface. The footing was wet and spongy, yet not at all resilient, and it felt cold; Honath's toes curled involuntarily.

"Come on, Seth," Charl said in a hushed voice. "They won't haul it back up until we're all out. You know that."

Alaskon looked around into the chilly mists. "Yes," he said. "And we'll need a needsmith down here. With good tools, there's just a chance—"

Seth's eyes had been darting back and forth from one to the other. With a sudden chattering scream, he bounded out of the bottom of the basket, soaring over their heads in a long, flat leap and struck the high knee at the base of the nearest tree, an immense fan palm. As he hit, his legs doubled under him, and almost in the same motion he seemed to rocket straight up into the murky air.

Gaping, Honath looked up after him. The young needle-

smith had timed his course to the split second. He was already darting up the rope from which the Elevator was suspended. He did not even bother to look back.

After a moment, the basket tipped upright. The impact of Seth's weight hitting the rope evidently had been taken by the windlass team to mean that the condemned people were all out on the surface; a twitch on the rope was the usual signal. The basket began to rise, hobbling and dancing. Its speed of ascent, added to Seth's took his racing, dwindling figure out of sight quickly. After a while, the basket was gone, too.

"He'll never get to the top," Mathild whispered. "It's too far, and he's going too fast. He'll lose strength and fall."

"I don't think so," Alaskon said heavily. "He's agile and strong. If anyone could make it, he could."

"They'll kill him if he does."

"Of course they will," Alaskon said, shrugging.

"I won't miss him," Honath said.

"No more will I. But we could use some sharp needles down here, Honath. Now we'll have to plan to make our own—if we can identify the different woods, down here where there aren't any leaves to help us tell them apart."

Honath looked at the navigator curiously. Seth's bolt for the sky had distracted him from the realization that the basket, too, was gone, but now that desolate fact hit home. "You actually plan to stay alive in Hell, don't you, Alaskon?"

"Certainly," Alaskon said calmly. "This is no more Hell than—up there—is Heaven. It's the surface of the planet, no more, no less. We can stay alive if we don't panic. Were you just going to sit here until the furies came for you, Honath?"

"I hadn't thought much about it," Honath confessed. "But if there is any chance that Seth will lose his grip on that rope—before he reaches the top and they stab him—shouldn't we wait and see if we can catch him? He can't weigh more than 35 pounds. Maybe we could contrive some sort of a net—"

"He'd just break our bones along with his," Charl said.

"I'm for getting out of here as fast as possible."

“What for? Do you know a better place?”

“No, but whether this is Hell or not, there are demons down here. We’ve all seen them from up above. They must know that the Elevator always lands here and empties out free food. This must be a feeding-ground for them—”

He had not quite finished speaking when the branches began to sigh and toss, far above. A gust of stinging droplets poured along the blue air and thunder rumbled. Mathild whimpered.

“It’s only a squall coming up,” Honath said. But the words came out in a series of short croaks. As the wind had moved through the trees, Honath had automatically flexed his knees and put his arms out for handholds, awaiting the long wave of response to pass through the ground beneath him. But nothing happened. The surface under his feet remained stolidly where it was, flexing not a fraction of an inch in any direction. And there was nothing nearby for his hands to grasp.

He staggered, trying to compensate for the failure of the ground to move. At the same moment another gust of wind blew through the aisles, a little stronger than the first, and calling insistently for a new adjustment of his body to the waves which would be passing among the treetops. Again the squashy surface beneath him refused to respond. The familiar give-and-take of the vine-web to the winds, a part of his world as accustomed as the winds themselves, was gone.

Honath was forced to sit down, feeling distinctly ill. The damp, cool earth under his furless buttocks was unpleasant, but he could not have remained standing any longer without losing his meagre prisoner’s breakfast. One grappling hand caught hold of the ridged, gritting stems of a clump of horse-tail, but the contact failed to allay the uneasiness.

The others seemed to be bearing it no better than Honath. Mathild in particular was rocking dizzily, her lips compressed, her hands clasped to her delicate ears.

Dizziness. It was unheard of up above, except among those who had suffered grave head injuries or were otherwise

very ill. But on the motionless ground of Hell, it was evidently going to be with them constantly.

Charl squatted, swallowing convulsively. "I—I can't stand," he moaned.

"Nonsense!" Alaskon said, though he had remained standing only by clinging to the huge, mud-colored bulb of a cycadella. "It's just a disturbance of our sense of balance. We'll get used to it."

"We'd better," Honath said, relinquishing his grip on the horsetails by a sheer act of will. "I think Charl's right about this being a feeding-ground, Alaskon. I hear something moving around in the ferns. And if this rain lasts long, the water will rise here, too. I've seen silver flashes from down here many a time after heavy rains."

"That's right," Mathild said, her voice subdued. "The base of the fan-palm grove always floods. That's why the tree-tops are lower there."

The wind seemed to have let up a little, though the rain was still falling. Alaskon stood up tentatively and looked around.

"Then let's move on," he said. "If we try to keep under cover until we get to higher ground—"

A faint crackling sound, high above his head, interrupted him. It got louder. Feeling a sudden spasm of pure fear, Honath looked up.

Nothing could be seen for an instant but the far-away curtain of branches and fern fronds. Then, with shocking suddenness, something plummeted through the blue-green roof and came tumbling toward them. It was a man, twisting and tumbling through the air with grotesque slowness, like a child turning in its sleep. They scattered.

The body hit the ground with a sodden thump, but there were sharp overtones to the sound, like the bursting of a gourd. For a moment nobody moved. Then Honath crept forward.

It had been Seth, as Honath had realized the moment

the figurine had burst through the branches far above. But it had not been the fall that had killed him. He had been run through by at least a dozen needles—some of them, beyond doubt, tools from his own shop, their points edged hair-fine by his own precious strops of leatherwood-bark.

There would be no reprieve from above. The sentence was one thousand days. This burst and broken huddle of fur was the only alternative.

And the first day had barely begun.

They toiled all the rest of the day to reach higher ground. As they stole cautiously closer to the foothills of the Great Range and the ground became firmer, they were able to take to the air for short stretches, but they were no sooner aloft among the willows than the lizard-birds came squalling down on them by the dozens, fighting among each other for the privilege of nipping these plump and incredibly slow-moving monkeys.

No man, no matter how confirmed a free-thinker, could have stood up under such an onslaught by the creatures he had been taught as a child to think of as his ancestors. The first time it happened, every member of the party dropped like a pine-cone to the sandy ground and lay paralyzed under the nearest cover, until the brindle-feathered, fan-tailed screamers tired of flying in such tight circles and headed for clearer air. Even after the lizard-birds had given up, they crouched quietly for a long time, waiting to see what greater demons might have been attracted by the commotion.

Luckily, on the higher ground there was much more cover from low-growing shrubs and trees—palmetto, sassafras, several kinds of laurel, magnolia, and a great many sedges. Up here, too, the endless jungle began to break around the bases of the great pink cliffs. Overhead were welcome vistas of open sky, sketchily crossed by woven bridges leading from the vine-world to the cliffs themselves. In the intervening columns of blue air a whole hierarchy of flying creatures ranked themselves, layer by layer. First, the low-flying beetles, bees and

two-winged insects. Next were the dragonflies which hunted them, some with wingspreads as wide as two feet. Then the lizard-birds, hunting the dragonflies and anything else that could be nipped without fighting back. And at last, far above, the great gliding reptiles coasting along the brows of the cliffs, riding the rising currents of air, their long-jawed hunger stalking anything that flew—as they sometimes stalked the birds of the attic world, and the flying fish along the breast of the distant sea.

The party halted in an especially thick clump of sedges. Though the rain continued to fall, harder than ever, they were all desperately thirsty. They had yet to find a single bromelaid: evidently the tank-plants did not grow in Hell. Cupping their hands to the weeping sky accumulated surprisingly little water; and no puddles large enough to drink from accumulated on the sand. But at least, here under the open sky, there was too much fierce struggle in the air to allow the lizard-birds to congregate and squall about their hiding place.

The white sun had already set and the red sun's vast arc still bulged above the horizon. In the lurid glow the rain looked like blood, and the seamed faces of the pink cliffs had all but vanished. Honath peered dubiously out from under the sedges at the still distant escarpments.

"I don't see how we can hope to climb those," he said, in a low voice. "That kind of limestone crumbles as soon as you touch it, otherwise we'd have had better luck with our war against the cliff tribe."

"We could go around the cliffs," Charl said. "The foothills of the Great Range aren't very steep. If we could last until we get to them, we could go on up into the Range itself."

"To the volcanoes!" Mathild protested. "But nothing can live up there, nothing but the white fire-things. And there are the lava-flows, too, and the choking smoke—"

"Well, we can't climb these cliffs. Honath's quite right," Alaskon said. "And we can't climb the Basalt Steppes, either—there's nothing to eat along them, let alone any water or cover."

I don't see what else we can do but try to get up into the foothills."

"Can't we stay here?" Mathild said plaintively.

"No," Honath said, even more gently than he had intended. Mathild's four words were, he knew, the most dangerous words in Hell—he knew it quite surely, because of the imprisoned creature inside him that cried out to say "Yes" instead. "We have to get out of the country of the demons. And maybe—just maybe—if we can cross the Great Range, we can join a tribe that hasn't heard about our being condemned to Hell. There are supposed to be tribes on the other side of the Range, but the cliff people would never let our folk get through to them. That's on our side now."

"That's true," Alaskon said, brightening a little. "And from the top of the Range, we could come *down* into another tribe—instead of trying to climb up into their village out of Hell. Honath, I think it might work."

"Then we'd better try to sleep right here and now," Charl said. "It seems safe enough. If we're going to skirt the cliffs and climb those foothills, we'll need all the strength we've got left."

Honath was about to protest, but he was suddenly too tired to care. Why not sleep it over? And if in the night they were found and taken—well, that would at least put an end to the struggle.

It was a cheerless and bone-damp bed to sleep in, but there was no alternative. They curled up as best they could. Just before he was about to drop off at last, Honath heard Mathild whimpering to herself and, on impulse, crawled over to her and began to smooth down her fur with his tongue. To his astonishment each separate, silky hair was loaded with dew. Long before the girl had curled herself more tightly and her complaints had dwindled into sleepy murmurs, Honath's thirst was assuaged. He reminded himself to mention the method in the morning.

But when the white sun finally came up, there was no

time to think of thirst. Charl the Reader was gone. Something had plucked him from their huddled midst as neatly as a fallen breadfruit—and had dropped his cleaned ivory skull just as negligently, some two hundred feet farther on up the slope which led toward the pink cliffs.

Late that afternoon, the three found the blue, turbulent stream flowing out of the foothills of the Great Range. Not even Alaskon knew quite what to make of it. It looked like water, but it flowed like the rivers of lava that crept downward from the volcanoes. Whatever else it could be, obviously it wasn't water; water stood, it never flowed. It was possible to imagine a still body of water as big as this, but only in a moment of fancy, an exaggeration derived from the known bodies of water in the tank-plants. But this much water in motion? It suggested pythons; it was probably poisonous. It did not occur to any of them to drink from it. They were afraid even to touch it, let alone cross it, for it was almost surely as hot as the other kinds of lava-rivers. They followed its course cautiously into the foothills, their throats as dry and gritty as the hollow stems of horsetails.

Except for the thirst—which was in an inverted sense their friend, insofar as it overrode the hunger—the climbing was not difficult. It was only circuitous, because of the need to stay under cover, to reconnoiter every few yards, to choose the most sheltered course rather than the most direct. By an unspoken consent, none of the three mentioned Charl, but their eyes were constantly darting from side to side, searching for a glimpse of the thing that had taken him.

That was perhaps the worst, the most terrifying part of the tragedy: not once, since they had been in Hell, had they actually seen a demon—or even any animal as large as a man. The enormous, three-taloned footprint they had found in the sand beside their previous night's bed—the spot where the thing had stood, looking down at the four sleepers from above, coldly deciding which of them to seize—was the only evidence they had that they were now really in the same world with the

demons. The world of the demons they had sometimes looked down upon from the remote vine-webs.

The footprint—and the skull.

By nightfall, they had ascended perhaps a hundred and fifty feet. It was difficult to judge distances in the twilight, and the token vine bridges from the attic world to the pink cliffs were now cut off from sight by the intervening masses of the cliffs themselves. But there was no possibility that they could climb higher today. Although Mathild had born the climb surprisingly well, and Honath himself still felt almost fresh, Alaskon was completely winded. He had taken a bad cut on one hip from a serrated spike of volcanic glass against which he had stumbled. The wound, bound with leaves to prevent its leaving a spoor which might be followed, evidently was becoming steadily more painful.

Honath finally called a halt as soon as they reached the little ridge with the cave in back of it. Helping Alaskon over the last boulders, he was astonished to discover how hot the navigator's hands were. He took him back into the cave and then came out onto the ledge again.

"He's really sick," he told Mathild in a low voice. "He needs water, and another dressing for that cut. And we've got to get both for him somehow. If we ever get to the jungle on the other side of the Range, we'll need a navigator even worse than we need a needlesmith."

"But how? I could dress the cut if I had the materials, Honath. But there's no water up here. It's a desert; we'll never get across it."

"We've got to try. I can get him water, I think. There was a big cycladella on the slope we came up, just before we passed that obsidian spur that hurt Alaskon. Gourds that size usually have a fair amount of water inside them and I can use a piece of the spur to rip it open—"

A small hand came out of the darkness and took him tightly by the elbow. "Honath, you can't go back down there. Suppose the demon that—that took Charl is still following us?"

They hunt at night—and this country is all so strange....”

“I can find my way. I’ll follow the sound of the stream of blue lava or whatever it is. You pull some fresh leaves for Alaskon and try to make him comfortable. Better loosen those vines around the dressing a little. I’ll be back.”

He touched her hand and pried it loose gently. Then, without stopping to think about it any further, he slipped off the ledge and edged toward the sound of the stream, travelling crabwise on all fours.

But he was swiftly lost. The night was thick and completely impenetrable, and he found that the noise of the stream seemed to come from all sides, providing him no guide at all. Furthermore, his memory of the ridge which led up to the cave appeared to be faulty, for he could feel it turning sharply to the right beneath him, though he remembered distinctly that it had been straight past the first side-branch, and then had gone to the left. Or had he passed the first side-branch in the dark without seeing it? He probed the darkness cautiously with one hand.

At the same instant, a brisk, staccato gust of wind came whirling up out of the night across the ridge. Instinctively, Honath shifted his weight to take up the flexing of the ground beneath him.

He realized his error instantly and tried to arrest the complex set of motions, but a habit-pattern so deeply ingrained could not be frustrated completely. Overwhelmed with vertigo, Honath grappled at the empty air with hands, feet and tail and went toppling.

An instant later, with a familiar noise and an equally familiar cold shock that seemed to reach throughout his body, he was sitting in the midst of—

Water. Icy water. Water that rushed by him improbably with a menacing, monkeylike chattering, but water all the same.

It was all he could do to repress a hoot of hysteria. He hunkered down into the stream and soaked himself. Things

nibbled delicately at his calves as he bathed, but he had no reason to fear fish, small species of which often showed up in the tanks of the bromelads. After lowering his muzzle to the rushing, invisible surface and drinking his fill, he dunked himself completely and then clambered out onto the banks, carefully neglecting to shake himself.

Getting back to the ledge was much less difficult. “Mathild?” he called in a hoarse whisper. “Mathild, we’ve got water.”

“Come in here quick then. Alaskon’s worse. I’m afraid, Honath.”

Dripping, Honath felt his way into the cave. “I don’t have any container. I just got myself wet—you’ll have to sit him up and let him lick my fur.”

“I’m not sure he can.”

But Alaskon could, feebly, but sufficiently. Even the coldness of the water—a totally new experience for a man who had never drunk anything but the soup-warm contents of the bromelads—seemed to help him. He lay back at last, and said in a weak but otherwise normal voice: “So the stream was water after all.”

“Yes,” Honath said. “And there are fish in it, too.”

“Don’t talk,” Mathild said. “Rest, Alaskon.”

“I’m resting. Honath, if we stick to the course of the stream.... Where was I? Oh. We can follow the stream through the Range, now that we know it’s water. How did you find that out?”

“I lost my balance and fell into it.”

Alaskon chuckled. “Hell’s not so bad, is it?” he said. Then he sighed, and rushes creaked under him.

“Mathild! What’s the matter? Is he—did he die?”

“No ... no. He’s breathing. He’s still sicker than he realizes, that’s all.... Honath—if they’d known, up above, how much courage you have—”

“I was scared white,” Honath said grimly. “I’m still scared.”

But her hand touched his again in the solid blackness, and after he had taken it, he felt irrationally cheerful. With Alaskon breathing so raggedly behind them, there was little chance that either of them would be able to sleep that night; but they sat silently together on the hard stone in a kind of temporary peace. When the mouth of the cave began to outline itself with the first glow of the red sun, they looked at each other in a conspiracy of light all their own.

Let us unlearn everything we knew only by rote, go back to the beginning, learn all over again, and continue to learn....

With the first light of the white sun, a half-grown megatherium cub rose slowly from its crouch at the mouth of the cave and stretched luxuriously, showing a full set of saber-like teeth. It looked at them steadily for a moment, its ears alert, then turned and loped away down the slope.

How long it had been crouched there listening to them, it was impossible to know. They had been lucky that they had stumbled into the lair of a youngster. A full-grown animal would have killed them all, within a few seconds after its cat's-eyes had collected enough dawn to identify them positively. The cub, since it had no family of its own, evidently had only been puzzled to find its den occupied and didn't want to quarrel about it.

The departure of the big cat left Honath frozen, not so much frightened as simply stunned by so unexpected an end to the vigil. At the first moan from Alaskon, however, Mathild was up and walking softly to the navigator, speaking in a low voice, sentences which made no particular sense and perhaps were not intended to. Honath stirred and followed her.

Halfway back into the cave, his foot struck something and he looked down. It was the thigh-bone of some medium-large animal, imperfectly cleaned and not very recent. It looked like a keepsake the megatherium had hoped to save from the usurpers of its lair. Along a curved inner surface there was a patch of thick grey mold. Honath squatted and peeled it off carefully.

“Mathild, we can put this over the wound,” he said.

“Some molds help prevent wounds from festering.... How is he?”

“Better, I think,” Mathild murmured. “But he’s still feverish. I don’t think we’ll be able to move on today.”

Honath was unsure whether to be pleased or disturbed. Certainly he was far from anxious to leave the cave, where they seemed at least to be reasonably comfortable. Possibly they would also be reasonably safe, for the low-roofed hole almost surely still smelt of megatherium, and intruders would recognize the smell—as the men from the attic world could not—and keep their distance. They would have no way of knowing that the cat had only been a cub and that it had vacated the premises, though of course the odor would fade before long.

Yet it was important to move on, to cross the Great Range if possible, and in the end to wind their way back to the world where they belonged. And to win vindication, no matter how long it took. Even should it prove relatively easy to survive in Hell—and there were few signs of that, thus far—the only proper course was to fight until the attic world was totally regained. After all, it would have been the easy and the comfortable thing, back there at the very beginning, to have kept one’s incipient heresies to oneself and remained on comfortable terms with one’s neighbors. But Honath had spoken up, and so had the rest of them, in their fashions.

It was the ancient internal battle between what Honath wanted to do, and what he knew he ought to do. He had never heard of Kant and the Categorical Imperative, but he knew well enough which side of his nature would win in the long run. But it had been a cruel joke of heredity which had fastened a sense of duty onto a lazy nature. It made even small decisions egregiously painful.

But for the moment at least, the decision was out of his hands. Alaskon was too sick to be moved. In addition, the strong beams of sunlight which had been glaring in across the floor of the cave were dimming by the instant, and there was a

distant, premonitory growl of thunder.

“Then we’ll stay here,” he said. “It’s going to rain again, and hard this time. Once it’s falling in earnest, I can go out and pick us some fruit—it’ll screen me even if anything is prowling around in it. And I won’t have to go as far as the stream for water, as long as the rain keeps up.”

The rain, as it turned out, kept up all day, in a growing downpour which completely curtained the mouth of the cave by early afternoon. The chattering of the nearby stream grew quickly to a roar.

By evening, Alaskon’s fever seemed to have dropped almost to normal, and his strength nearly returned as well. The wound, thanks more to the encrusted mat of mold than to any complications within the flesh itself, was still ugly-looking, but it was now painful only when the navigator moved carelessly, and Mathild was convinced that it was mending. Alaskon himself, having been deprived of activity all day, was unusually talkative.

“Has it occurred to either of you,” he said in the gathering gloom, “that since that stream is water, it can’t possibly be coming from the Great Range? All the peaks over there are just cones of ashes and lava. We’ve seen young volcanoes in the process of building themselves, so we’re sure of that. What’s more, they’re usually hot. I don’t see how there could possibly be any source of water in the Range—not even run-off from the rains.”

“It can’t just come up out of the ground,” Honath said. “It must be fed by rain. By the way it sounds now, it could even be the first part of a flood.”

“As you say, it’s probably rain-water,” Alaskon said cheerfully. “But not off the Great Range, that’s out of the question. Most likely it collects on the cliffs.”

“I hope you’re wrong,” Honath said. “The cliffs may be a little easier to climb from this side, but there’s still the cliff tribe to think about.”

“Maybe, maybe. But the cliffs are big. The tribes on this

side may never have heard of the war with our tree-top folk. No, Honath, I think that's our only course."

"If it is," Honath said grimly, "we're going to wish more than ever that we had some stout, sharp needles among us."

Alaskon's judgment was quickly borne out. The three left the cave at dawn the next morning, Alaskon moving somewhat stiffly but not otherwise noticeably incommoded, and resumed following the stream bed upwards—a stream now swollen by the rains to a roaring rapids. After winding its way upwards for about a mile in the general direction of the Great Range, the stream turned on itself and climbed rapidly back toward the basalt cliffs, falling toward the three over successively steeper shelves of jutting rock.

Then it turned again, at right angles, and the three found themselves at the exit of a dark gorge, little more than thirty feet high, but both narrow and long. Here the stream was almost perfectly smooth, and the thin strip of land on each side of it was covered with low shrubs. They paused and looked dubiously into the canyon. It was singularly gloomy.

"There's plenty of cover, at least," Honath said in a low voice. "But almost anything could live in a place like that."

"Nothing very big could hide in it," Alaskon pointed out. "It should be safe. Anyhow it's the only way to go."

"All right. Let's go ahead, then. But keep your head down, and be ready to jump!"

Honath lost the other two by sight as soon as they crept into the dark shrubbery, but he could hear their cautious movements nearby. Nothing else in the gorge seemed to move at all, not even the water, which flowed without a ripple over an invisible bed. There was not even any wind, for which Honath was grateful, although he had begun to develop an immunity to the motionless ground beneath them.

After a few moments, Honath heard a low whistle. Creeping sidewise toward the source of the sound, he nearly bumped into Alaskon, who was crouched beneath a thickly-spreading magnolia. An instant later, Mathilda's face peered

out of the dim greenery.

“Look,” Alaskon whispered. “What do you make of this?”

‘This’ was a hollow in the sandy soil, about four feet across and rimmed with a low parapet of earth—evidently the same earth that had been scooped out of its center. Occupying most of it were three grey, ellipsoidal objects, smooth and featureless.

“Eggs,” Mathild said wonderingly.

“Obviously. But look at the size of them! Whatever laid them must be gigantic. I think we’re trespassing in something’s private valley.”

Mathild drew in her breath. Honath thought fast, as much to prevent panic in himself as in the girl. A sharp-edged stone lying nearby provided the answer. He seized it and struck.

The outer surface of the egg was leathery rather than brittle; it tore raggedly. Deliberately, Honath bent and put his mouth to the oozing surface.

It was excellent. The flavor was decidedly stronger than that of birds’ eggs, but he was far too hungry to be squeamish. After a moment’s amazement, Alaskon and Mathild attacked the other two ovoids with a will. It was the first really satisfying meal they had had in Hell. When they finally moved away from the devastated nest, Honath felt better than he had since the day he was arrested.

As they moved on down the gorge, they began again to hear the roar of water, though the stream looked as placid as ever. Here, too, they saw the first sign of active life in the valley: a flight of giant dragonflies skimming over the water. The insects took fright as soon as Honath showed himself, but quickly came back, their nearly non-existent brains already convinced that there had always been men in the valley.

The roar got louder very rapidly. When the three rounded the long, gentle turn which had cut off their view from the exit, the source of the roar came into view. It was a

sheet of falling water as tall as the depth of the gorge itself, which came arcing out from between two pillars of basalt and fell to a roiling, frothing pool.

“This is as far as we go!” Alaskon said, shouting to make himself heard over the tumult. “We’ll never be able to get up these walls!”

Stunned, Honath looked from side to side. What Alaskon had said was all too obviously true. The gorge evidently had begun life as a layer of soft, partly soluble stone in the cliffs, tilted upright by some volcanic upheaval, and then worn completely away by the rushing stream. Both cliff faces were of the harder rock, and were sheer and as smooth as if they had been polished by hand. Here and there a network of tough vines had begun to climb them, but nowhere did such a network even come close to reaching the top.

Honath turned and looked once more at the great arc of water and spray. If there were only some way to prevent their being forced to retrace their steps—

Abruptly, over the riot of the falls, there was a piercing, hissing shriek. Echoes picked it up and sounded it again and again, all the way up the battlements of the cliffs. Honath sprang straight up in the air and came down trembling, facing away from the pool.

At first he could see nothing. Then, down at the open end of the turn, there was a huge flurry of motion.

A second later, a two-legged, blue-green reptile half as tall as the gorge itself came around the turn in a single bound and lunged violently into the far wall of the valley. It stopped as if momentarily stunned, and the great grinning head turned toward them a face of sinister and furious idiocy.

The shriek set the air to boiling again. Balancing itself with its heavy tail, the beast lowered its head and looked redly toward the falls.

The owner of the robbed nest had come home. They had met a demon of Hell at last.

Honath’s mind at that instant went as white and blank

as the under-bark of a poplar. He acted without thinking, without even knowing what he did. When thought began to creep back into his head again, the three of them were standing shivering in semidarkness, watching the blurred shadow of the demon lurching back and forth upon the screen of shining water.



It had been nothing but luck, not foreplanning, to find that there was a considerable space between the back of the falls proper and the blind wall of the canyon. It had been luck, too, which had forced Honath to skirt the pool in order to reach the falls at all, and thus had taken them all behind the silver curtain at the point where the weight of the falling water was too low to hammer them down for good. And it had been the blindest stroke of all that the demon had charged after them directly into the pool, where the deep, boiling water had slowed its thrashing hind legs enough to halt it before it went under the falls, as it had earlier blundered into the hard wall of the gorge.

Not an iota of all this had been in Honath's mind before

he had discovered it to be true. At the moment that the huge reptile had screamed for the second time, he had simply grasped Mathild's hand and broken for the falls, leaping from low tree to shrub to fern faster than he had ever leapt before. He did not stop to see how well Mathild was keeping up with him, or whether or not Alaskon was following. He only ran. He might have screamed, too; he could not remember.

They stood now, all three of them, wet through, behind the curtain until the shadow of the demon faded and vanished. Finally Honath felt a hand thumping his shoulder, and turned slowly.

Speech was impossible here, but Alaskon's pointing finger was eloquent enough. Along the back wall of the falls, where centuries of erosion had failed to wear away completely the original soft limestone, there was a sort of serrated chimney, open toward the gorge, which looked as though it could be climbed. At the top of the falls, the water shot out from between the basalt pillars in a smooth, almost solid-looking tube, arching at least six feet before beginning to break into the fan of spray and rainbows which poured down into the gorge. Once the chimney had been climbed, it should be possible to climb out from under the falls without passing through the water again.

And after that—?

Abruptly, Honath grinned. He felt weak all through with reaction, and the face of the demon would probably be grinning in his dreams for a long time to come. But at the same time he could not repress a surge of irrational confidence. He gestured upward jauntily, shook himself, and loped forward into the throat of the chimney.

Hardly more than an hour later they were all standing on a ledge overlooking the gorge, with the waterfall creaming over the brink next to them, only a few yards away. From here, it was evident that the gorge itself was only the bottom of a far greater cleft, a split in the pink-and-grey cliffs as sharp as though it had been riven in the rock by a bolt of sheet light-

ning. Beyond the basalt pillars from which the fall issued, however, the stream foamed over a long ladder of rock shelves which seemed to lead straight up into the sky.

“That way?” Mathild said.

“Yes, and as fast as possible,” Alaskon said, shading his eyes. “It must be late. I don’t think the light will last much longer.”

“We’ll have to go single file,” Honath added. “And we’d better keep hold of each other’s hands. One slip on those wet steps and—it’s a long way down again.”

Mathild shuddered and took Honath’s hand convulsively. To his astonishment, the next instant she was tugging him toward the basalt pillars.

The irregular patch of deepening violet sky grew slowly as they climbed. They paused often, clinging to the jagged escarpments until their breath came back, and snatching icy water in cupped palms from the stream that fell down the ladder beside them. There was no way to tell how far up into the dusk the way had taken them, but Honath suspected that they were already somewhat above the level of their own vine-web world. The air smelled colder and sharper than it ever had above the jungle.

The final cut in the cliffs through which the stream fell was another chimney. It was steeper and more smooth-walled than the one which had taken them out of the gorge under the waterfall, but narrow enough to be climbed by bracing one’s back against one side, and one’s hands and feet against the other. The column of air inside the chimney was filled with spray, but in Hell that was too minor a discomfort to bother about.

At long last Honath heaved himself over the edge of the chimney onto flat rock, drenched and exhausted, but filled with an elation he could not suppress and did not want to. They were above the attic jungle; they had beaten Hell itself. He looked around to make sure that Mathild was safe, and then reached a hand down to Alaskon. The navigator’s bad leg had

been giving him trouble. Honath heaved mightily and Alaskon came heavily over the edge and lit sprawling on the high mesa.

The stars were out. For a while they simply sat and gasped for breath. Then they turned, one by one, to see where they were.

There was not a great deal to see. There was the mesa, domed with stars on all sides and a shining, finned spindle, like a gigantic minnow, pointing skyward in the center of the rocky plateau. And around the spindle, indistinct in the starlight...

... Around the shining minnow, tending it, were Giants.



This, then, was the end of the battle to do what was right, whatever the odds. All the show of courage against superstition, all the black battles against Hell itself, came down to this: *The Giants were real!*

They were unarguably real. Though they were twice as tall as men, stood straighter, had broader shoulders, were heavier across the seat and had no visible tails, their fellowship with men was clear. Even their voices, as they shouted to each other around their towering metal minnow, were the voices of men made into gods, voices as remote from those of men as the voices of men were remote from those of monkeys, yet just as clearly of the same family.

These were the Giants of the Book of Laws. They were not only real, but they had come back to Tellura as they had promised to do.

And they would know what to do with unbelievers, and with fugitives from Hell. It had all been for nothing—not only the physical struggle, but the fight to be allowed to think for

oneself as well. The gods existed, literally, actually. This belief was the real hell from which Honath had been trying to fight free all his life—but now it was no longer just a belief. It was a fact, a fact that he was seeing with his own eyes.

The Giants had returned to judge their handiwork. And the first of the people they would meet would be three outcasts, three condemned and degraded criminals, three jailbreakers—the worst possible detritus of the attic world.

All this went searing through Honath's mind in less than a second, but nevertheless Alaskon's mind evidently had worked still faster. Always the most outspoken unbeliever of the entire little group of rebels, the one among them whose whole world was founded upon the existence of rational explanations for everything, his was the point of view most completely challenged by the sight before them now. With a deep, sharply indrawn breath, he turned abruptly and walked away from them.

Mathild uttered a cry of protest, which she choked off in the middle; but it was already too late. A round eye on the great silver minnow came alight, bathing them all in an oval patch of brilliance.

Honath darted after the navigator. Without looking back, Alaskon suddenly was running. For an instant longer Honath saw his figure, poised delicately against the black sky. Then he dropped silently out of sight, as suddenly and completely as if he had never been.

Alaskon had borne every hardship and every terror of the ascent from Hell with courage and even with cheerfulness but he had been unable to face being told that it had all been meaningless.

Sick at heart, Honath turned back, shielding his eyes from the miraculous light. There was a clear call in some unknown language from near the spindle.

Then there were footsteps, several pairs of them, coming closer.

It was time for the Second Judgment.

After a long moment, a big voice from the darkness said: “Don’t be afraid. We mean you no harm. We’re men, just as you are.”

The language had the archaic flavor of the Book of Laws, but it was otherwise perfectly understandable. A second voice said: “What are you called?”

Honath’s tongue seemed to be stuck to the roof of his mouth. While he was struggling with it, Mathild’s voice came clearly from beside him:

“He is Honath the Pursemaker, and I am Mathild the Forager.”

“You are a long distance from the place we left your people,” the first Giant said. “Don’t you still live in the vine-webs above the jungles?”

“Lord—”

“My name is Jarl Eleven. This man is Gerhardt Adler.”

This seemed to stop Mathild completely. Honath could understand why. The very notion of addressing Giants by name was nearly paralyzing. But since they were already as good as cast down into Hell again, nothing could be lost by it.

“Jarl Eleven,” he said, “the people still live among the vines. The floor of the jungle is forbidden. Only criminals are sent there. We are criminals.”

“Oh?” Jarl Eleven said. “And you’ve come all the way from the surface to this mesa? Gerhardt, this is prodigious. You have no idea what the surface of this planet is like—it’s a place where evolution has never managed to leave the tooth-and-nail stage. Dinosaurs from every period of the Mesozoic, primitive mammals all the way up the scale to the ancient cats the works. That’s why the original seeding team put these people in the treetops instead.”

“Honath, what was your crime?” Gerhardt Adler said.

Honath was almost relieved to have the questioning come so quickly to this point. Jarl Eleven’s aside, with its many terms he could not understand, had been frightening in its very meaninglessness.

“There were five of us,” Honath said in a low voice. “We said we—that we did not believe in the Giants.”

There was a brief silence. Then, shockingly, both Jarl Eleven and Gerhardt Adler burst into enormous laughter.

Mathild cowered, her hands over her ears. Even Honath flinched and took a step backward. Instantly, the laughter stopped, and the Giant called Jarl Eleven stepped into the oval of light and sat down beside them. In the light, it could be seen that his face and hands were hairless, although there was hair on his crown; the rest of his body was covered by a kind of cloth. Seated, he was no taller than Honath, and did not seem quite so fearsome.

“I beg your pardon,” he said. “It was unkind of us to laugh, but what you said was highly unexpected. Gerhardt, come over here and squat down, so that you don’t look so much like a statue of some general. Tell me, Honath, in what way did you not believe in the Giants?”

Honath could hardly believe his ears. A Giant had begged his pardon! Was this still some joke even more cruel? But whatever the reason, Jarl Eleven had asked him a question.

“Each of the five of us differed,” he said. “I held that you were not—not real except as symbols of some abstract truth. One of us, the wisest, believed that you did not exist in any sense at all. But we all agreed that you were not gods.”

“And of course we aren’t,” Jarl Eleven said. “We’re men. We come from the same stock as you. We’re not your rulers, but your brothers. Do you understand what I say?”

“No,” Honath admitted.

“Then let me tell you about it. There are men on many worlds, Honath. They differ from one another, because the worlds differ, and different kinds of men are needed to people each one. Gerhardt and I are the kind of men who live on a world called Earth, and many other worlds like it. We are two very minor members of a huge project called a ‘seeding program’, which has been going on for thousands of years now. It’s the job of the seeding program to survey newly discovered

worlds, and then to make men suitable to live on each new world.”

“To make men? But only gods—”

“No, no. Be patient and listen,” said Jarl Eleven. “We don’t make men. We make them suitable. There’s a great deal of difference between the two. We take the living germ plasm, the sperm and the egg, and we modify it. When the modified man emerges, we help him to settle down in his new world. That’s what we did on Tellura—it happened long ago, before Gerhardt and I were even born. Now we’ve come back to see how you people are getting along, and to lend a hand if necessary.”

He looked from Honath to Mathild, and back again. “Do you understand?” he said.

“I’m trying.” Honath said. “But you should go down to the jungle-top, then. We’re not like the others; they are the people you want to see.”

“We shall, in the morning. We just landed here. But, just because you’re not like the others, we’re more interested in you now. Tell me, has any condemned man ever escaped from the jungle floor before you people?”

“No, never. That’s not surprising. There are monsters down there.”

Jarl Eleven looked sidewise at the other Giant. He seemed to be smiling. “When you see the films,” he remarked, “you’ll call that the understatement of the century. Honath, how did you three manage to escape, then?”

Haltingly at first, and then with more confidence as the memories came crowding vividly back, Honath told him. When he mentioned the feast at the demon’s nest, Jarl Eleven again looked significantly at Adler, but he did not interrupt.

“And finally we got to the top of the chimney and came out on this flat space,” Honath said. “Alaskon was still with us then, but when he saw you and the metal thing he threw himself back down the cleft. He was a criminal like us, but he should not have died. He was a brave man, and a wise one.”

“Not wise enough to wait until all the evidence was in,” Adler said enigmatically. “All in all, Jarl, I’d say ‘prodigious’ is the word for it. This is easily the most successful seeding job any team has ever done, at least in this limb of the galaxy. And what a stroke of luck, to be on the spot just as it came to term, and with a couple at that!”

“What does he mean?” Honath said.

“Just this, Honath. When the seeding team set your people up in business on Tellura, they didn’t mean for you to live forever in the treetops. They knew that, sooner or later, you’d have to come down to the ground and learn to fight this planet on its own terms. Otherwise, you’d go stale and die out.”

“Live on the ground all the time?” Mathild said in a faint voice.

“Yes, Mathild. The life in the treetops was to have been only an interim period, while you gathered knowledge you needed about Tellura and put it to use. But to be the real masters of the world, you will have to conquer the surface, too.

“The device your people worked out, that of sending criminals to the surface, was the best way of conquering the planet that they could have picked. It takes a strong will and courage to go against custom, and both those qualities are needed to lick Tellura. Your people exiled just such fighting spirits to the surface, year after year after year.

“Sooner or later, some of those exiles were going to discover how to live successfully on the ground and make it possible for the rest of your people to leave the trees. You and Honath have done just that.”

“Observe please, Jarl,” Adler said. “The crime in this first successful case was ideological. That was the crucial turn in the criminal policy of these people. A spirit of revolt is not quite enough, but couple it with brains and—*ecce homo!*”

Honath’s head was swimming. “But what does all this mean?” he said. “Are we—not condemned to Hell any more?”

“No, you’re still condemned, if you still want to call it that,” Jarl Eleven said soberly. “You’ve learned how to live

down there, and you've found out something even more valuable: how to stay alive while cutting down your enemies. Do you know that you killed three demons with your bare hands, you and Mathild and Alaskon?"

"Killed—"

"Certainly," Jarl Eleven said. "You ate three eggs. That is the classical way, and indeed the only way, to wipe out monsters like the dinosaurs. You can't kill the adults with anything short of an anti-tank gun, but they're helpless in embryo—and the adults haven't the sense to guard their nests."

Honath heard, but only distantly. Even his awareness of Mathild's warmth next to him did not seem to help much.

"Then we have to go back down there," he said dully. "And this time forever."

"Yes," Jarl Eleven said, his voice gentle. "But you won't be alone, Honath. Beginning tomorrow, you'll have all your people with you."

"All our people? But you're going to drive them out?"

"All of them. Oh, we won't prohibit the use of the vine-webs too, but from now on your race will have to fight it out on the surface as well. You and Mathild have proven that it can be done. It's high time the rest of you learned, too."

"Jarl, you think too little of these young people themselves," Adler said. "Tell them what is in store for them. They are frightened."

"Of course, of course. It's obvious. Honath, you and Mathild are the only living individuals of your race who know how to survive down there on the surface. And we're not going to tell your people how to do that. We aren't even going to drop them so much as a hint. That part of it is up to you."

Honath's jaw dropped.

"It's up to you," Jarl Eleven repeated firmly. "We'll return you to your tribe tomorrow, and we'll tell your people that you two know the rules for successful life on the ground—and that everyone else has to go down and live there too. We'll tell them nothing else but that. What do you think they'll do

then?”

“I don’t know,” Honath said dazedly. “Anything could happen. They might even make us Spokesman and Spokeswoman—except that we’re just common criminals.”

“Uncommon pioneers, Honath. The man and the woman to lead the humanity of Tellura out of the attic, into the wide world.” Jarl Eleven got to his feet, the great light playing over him. Looking up after him, Honath saw that there were at least a dozen other Giants standing just outside the oval of light, listening intently to every word.

“But there’s a little time to be passed before we begin,” Jarl Eleven said. “Perhaps you two would like to look over our ship.”

Humbly, but with a soundless emotion much like music inside him, Honath took Mathild’s hand. Together they walked away from the chimney to Hell, following the footsteps of the Giants.

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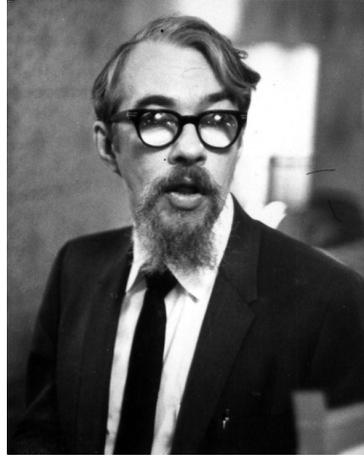
IN THIS ISSUE • LET 'EM BREATHE SPACE BY LESTER DEL REY



Story illustrations by Eberle

Leonard Knapp was born in 1915, and changed his name to Ramon Felipe Alvarez-del Rey, then to the name we know him by, Lester del Rey.

Born in Clydesdale, Minnesota, he started writing at the beginning of the “golden age of science fiction”. His first story, *The Faithful*, was published by John Campbell in the April 1938 edition of *Astounding*.



He worked as a short order cook, among other jobs, when his writing wasn't selling well. The *Science Fiction Encyclopedia* notes that he was a “versatile but rather erratic writer who never fulfilled his early promise.”

In the 1950s he edited several pulp magazines, including *Space SF*, *Fantasy Fiction*, *Science Fiction Adventures*, *Rocket Stories*, and *Fantasy Fiction*, sometimes under assumed names.

He died at age 77 in May of 1993 in New York City.



LET 'EM BREATHE SPACE!

BY LESTER DEL REY

ILLUSTRATED BY EBERLE

Eighteen men and two women in the closed world of a space ship for five months can only spell tension and trouble—but in this case, the atmosphere was *literally* poisoned.

Five months out from Earth, we were half-way to Saturn and three-quarters of the way to murder. At least, I was. I was

sick of the feuding, the worries and the pettiness of the other nineteen aboard. My stomach heaved at the bad food, the eternal smell of people, and the constant sound of nagging and complaints. For ten lead pennies, I'd have gotten out into space and tried walking back to Earth. Sometimes I thought about doing it without the pennies.

But I knew I wasn't that tough, in spite of what I looked. I'd been built to play fullback, and my questionable brunet beauty had been roughed up by the explosion years before as thoroughly as dock fighting on all the planets could have done. But sometimes I figured all that meant was that there was more of me to hurt, and that I'd had more experience screaming when the anodyne ran out.

Anyhow, whole-wheat pancakes made with sourdough for the ninth "morning" running was too damned much! I felt my stomach heave over again, took one whiff of the imitation maple syrup, and shoved the mess back fast while I got up faster.

It was a mistake. Phil Riggs, our scrawny, half-pint meteorologist, grinned nastily and reached for the plate. "Smatter, Paul? Don't you like your breakfast? It's good for you—whole wheat contains bran. The staff of life. Man, after that diet of bleached paste...."

There's one guy like that in every bunch. The cook was mad at us for griping about his coffee, so our group of scientists on this cockeyed Saturn Expedition were getting whole wheat flour as punishment, while Captain Muller probably sat in his cabin chuckling about it. In our agreement, there was a clause that we could go over Muller's head on such things with a unanimous petition—but Riggs had spiked that. The idiot liked bran in his flour, even for pancakes!

Or else he was putting on a good act for the fun of watching the rest of us suffer.

"You can take your damned whole wheat and stuff it—" I started. Then I shrugged and dropped it. There were enough feuds going on aboard the cranky old *Wahoo*! "Seen Jenny this

morning, Phil?"

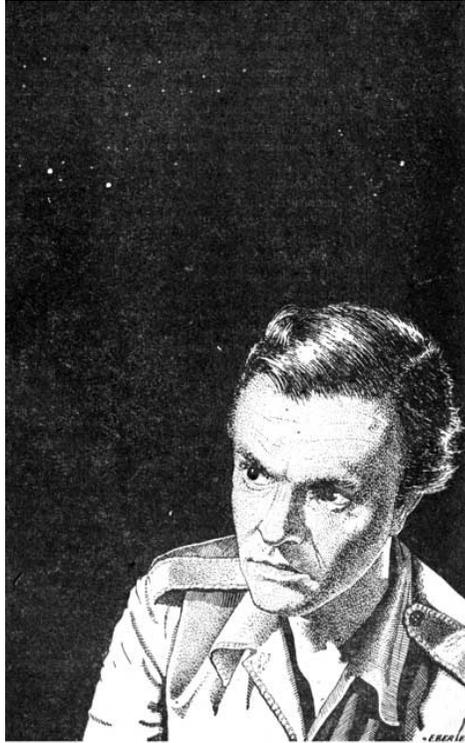
He studied me insolently. "She told Doc Napier she had some stuff growing in hydroponics she wanted to look at. You're wasting your time on that babe, boy!"

"Thanks for nothing," I muttered at him, and got out before I really decided on murder. Jenny Sanderson was our expedition biologist. A natural golden blonde, just chin-high on me, and cute enough to earn her way through a Ph. D. doing modelling. She had a laugh that would melt a brass statue and which she used too much on Doc Napier, on our chief, and even on grumpy old Captain Muller—but sometimes she used it on me, when she wanted something. And I never did have much use for a girl

who was the strong independent type where there was a man to do the dirty work, so that was okay.

I suppose it was natural, with only two women among eighteen men for month after month, but right then I probably liked Doc Napier less than the captain, even. I pulled myself away from the corridor to hydroponics, started for observation, and then went on into the cubbyhole they gave me for a cabin. On the *Wahoo*, all a man could do was sleep or sit around and think about murder.

Well, I had nobody to blame but myself. I'd asked for the job when I first heard Dr. Pietro had collected funds and



priorities for a trip to study Saturn's rings at close hand. And because I'd done some technical work for him on the Moon, he figured he might as well take me as any other good all-around mechanic and technician. He hadn't asked me, though—that had been my own stupid idea.

Paul Tremaine, self-cure expert! I'd picked up a nice phobia against space when the super-liner *Lauri Ellu* cracked up with four hundred passengers on my first watch as second engineer. I'd gotten free and into a suit, but after they rescued me, it had taken two years on the Moon before I could get up nerve for the shuttle back to Earth. And after eight years home, I should have let well enough alone. If I'd known anything about Pietro's expedition, I'd have wrapped myself in my phobia and loved it.

But I didn't know then that he'd done well with priorities and only fair with funds. The best he could afford was the rental of the old Earth-Mars-Venus triangle freighter. Naturally, when the *Wahoo's* crew heard they were slated for what would be at least three years off Earth without fancy bonus rates, they quit. Since nobody else would sign on, Pietro had used his priorities to get an injunction that forced them back aboard. He'd stuffed extra oxygen, water, food and fertilizer on top of her regular supplies, then, filled her holds with some top level fuel he'd gotten from a government assist, and set out. And by the time I found out about it, my own contract was iron-bound, and I was stuck.

As an astrophysicist, Pietro was probably tops. As a man to run the Lunar Observatory, he was a fine executive. But as a man to head up an expedition into deep space, somebody should have given him back his teething ring.

Not that the *Wahoo* couldn't make the trip with the new fuel; she'd been one of the early survey ships before they turned her into a freighter. But she was meant for a crew of maybe six, on trips of a couple of months. There were no game rooms, no lounges, no bar or library—nothing but what had to be. The only thing left for most of us aboard was to develop

our hatreds of the petty faults of the others. Even with a homogeneous and willing crew, it was a perfect set-up for cabin fever, and we were as heterogeneous as they came.

Naturally the crew hated the science boys after being impressed into duty, and also took it out on the officers. The officers felt the same about both other groups. And the scientists hated the officers and crew for all the inconveniences of the old *Wahoo*. Me? I was in no-man's land—technically in the science group, but without a pure science degree; I had an officer's feelings left over from graduating as an engineer on the ships; and I looked like a crewman.

It cured my phobia, all right. After the first month out, I was too disgusted to go into a fear funk. But I found out it didn't help a bit to like space again and know I'd stay washed up as a spaceman.

We'd been jinxed from the start. Two months out, the whole crew of scientists came down with something Doc Napier finally diagnosed as food poisoning; maybe he was right, since our group ate in our own mess hall, and the crew and officers who didn't eat with us didn't get it. Our astronomer, Bill Sanderson, almost died. I'd been lucky, but then I never did react to things much. There were a lot of other small troubles, but the next major trick had been fumes from the nuclear generators getting up into our quarters—it was always our group that had the trouble. If Eve Nolan hadn't been puttering with some of her trick films at the time—she and Walt Harris had the so-called night shift—and seen them blacken, we'd have been dead before they discovered it. And it took us two weeks of bunking with the sullen crew and decontamination before we could pick up life again. Engineer Wilcox had been decent about helping with it, blaming himself. But it had been a mess.

Naturally, there were dark hints that someone was trying to get us; but I couldn't see any crewman wiping us out just to return to Earth, where our contract, with its completion clause, would mean he wouldn't have a dime coming to him. Anyhow, the way things were going, we'd all go berserk before

we reached Saturn.

The lunch gong sounded, but I let it ring. Bullard would be serving us whole wheat biscuits and soup made out of beans he'd let soak until they turned sour. I couldn't take any more of that junk, the way I felt then. I heard some of the men going down the corridor, followed by a confused rumble of voices. Then somebody let out a yell. "Hey, rooob!"

That meant something. The old yell spacemen had picked up from carney people to rally their kind around against the foe. And I had a good idea of who was the foe. I heard the yell bounce down the passage again, and the slam of answering feet.

Then the gravity field went off. Or rather, was cut off. We may have missed the boat in getting anti-gravity, if there is such a thing, but our artificial gravity is darned near foolproof.

It was ten years since I'd moved in free fall, but Space Tech had done a good job of training good habits. I got out of my bunk, hit the corridor with a hand out, bounced, kicked, and dove toward the mess hall without a falter. The crewmen weren't doing so well—but they were coming up the corridor fast enough.

I could have wrung Muller's neck. Normally, in case of trouble, cutting gravity is smart. But not here, where the crew already wanted a chance to commit mayhem, and had more experience than the scientists.

Yet, surprisingly, when I hit the mess hall ten feet ahead of the deckhands, most of the scientists were doing all right. Hell, I should have known Pietro, Sanderson and a couple others would be used to no-grav; in astronomical work, you cut your eye teeth on that. They were braced around the cook, who huddled back in a corner, while our purser-steward, Sam, was still singing for help.

The fat face of the cook was dead white. Bill Sanderson, looking like a slim, blond ballet dancer and muscled like an apache expert, had him in one hand and was stuffing the latest batch of whole wheat biscuits down his throat. Bill's sister, Jen-

ny, was giggling excitedly and holding more biscuits.

The deckhands and Grundy, the mate, were almost at the door, and I had just time enough to slam it shut and lock it in their faces. I meant to enjoy seeing the cook taken down without any interruption.

Sam let out a final yell, and Bullard broke free, making a mess of it without weight. He was sputtering out bits of the biscuit. Hal Lomax reached out a big hand, stained with the chemicals that had been his life's work, and pushed the cook back.

And suddenly fat little Bullard switched from quaking fear to a blind rage. The last of the biscuit sailed from his mouth and he spat at Hal. "You damned hi-faluting black devil. You—you sneering at my cooking. I'm a white man, I am—I don't have to work for no black ni...."

I reached him first, though even Sam started for him then. You can deliver a good blow in free-fall, if you know how. His teeth against my knuckles stopped my leap, and the back of his head bounced off the wall. He was unconscious as he drifted by us, moving upwards. My knuckles stung, but it had been worth it. Anyhow, Jenny's look more than paid for the trouble.

The door shattered then, and the big hulk of Mate Grundy tumbled in, with the two deckhands and the pair from the engine room behind him. Sam let out a yell that sounded like protest, and they headed for us—just as gravity came on.

I pulled myself off the floor and out from under Bullard to see the stout, oldish figure of Captain Muller standing in the doorway, with Engineer Wilcox slouched easily beside him, looking like the typical natty space officer you see on television. Both held gas guns.

"All right, break it up!" Muller ordered. "You men get back to your work. And you, Dr. Pietro—my contract calls for me to deliver you to Saturn's moon, but it doesn't forbid me to haul you the rest of the way in irons. I won't have this aboard my ship!"

Pietro nodded, his little gray goatee bobbing, his lean body coming upright smoothly. "Quite right, Captain. Nor does it forbid me to let you and your men spend the sixteen months on the moon—where *I* command—in irons. Why don't you ask Sam what happened before you make a complete fool of yourself, Captain Muller?"

Sam gulped and looked at the crew, but apparently Pietro was right; the little guy had been completely disgusted by Bullard. He shrugged apologetically. "Bullard insulted Dr. Lomax, sir. I yelled for someone to help me get him out of here, and I guess everybody got all mixed up when gravity went off, and Bullard cracked his head on the floor. Just a misunderstanding, sir."

Muller stood there, glowering at the cut on my knuckles, and I could feel him aching for a good excuse to make his threat a reality. But finally, he grunted and swung on his heel, ordering the crew with him. Grundy threw us a final grimace and skulked off behind him. Finally there was only Wilcox, who grinned, shrugged, and shut the door quietly behind him. And we were left with the mess free-fall had made of the place.

I spotted Jenny heading across the room, carefully not seeing the fatuous glances Pietro was throwing her way, and I swung in behind. She nodded back at me, but headed straight for Lomax, with an odd look on her face. When she reached him, her voice was low and businesslike.

"Hal, what did those samples of Hendrix's show up?"

Hendrix was the Farmer, in charge of the hydroponics that turned the carbon dioxide we breathed out back to oxygen, and also gave us a bit of fresh vegetables now and then. Technically, he was a crewman, just as I was a scientist; but actually, he felt more like one of us.

Lomax looked surprised. "What samples, Jenny? I haven't seen Hendrix for two weeks."

"You—" She stopped, bit her lip, and frowned. She swung on me. "Paul, have you seen him?"

I shook my head. "Not since last night. He was asking

Eve and Walt to wake him up early, then.”

“That’s funny. He was worried about the plants yesterday and wanted Hal to test the water and chemical fertilizer. I looked for him this morning, but when he didn’t show up, I thought he was with you, Hal. And—the plants are dying!”

“All of them?” The half smile wiped off Hal’s face, and I could feel my stomach hit my insteps. When anything happens to the plants in a ship, it isn’t funny.

She shook her head again. “No—about a quarter of them. I was coming for help when the fight started. They’re all bleached out. And it looks like—like chromazone!”

That really hit me. They developed the stuff to fight off fungus on Venus, where one part in a billion did the trick. But it was tricky stuff; one part in ten-million would destroy the chlorophyll in plants in about twenty hours, or the hemoglobin in blood in about fifteen minutes. It was practically a universal poison.

Hal started for the door, then stopped. He glanced around the room, turned back to me, and suddenly let out a healthy bellow of seeming amusement. Jenny’s laugh was right in harmony. I caught the drift, and tried to look as if we were up to some monkey business as we slipped out of the room. Nobody seemed suspicious.

Then we made a dash for hydroponics, toward the rear of the ship. We scrambled into the big chamber together, and stopped. Everything looked normal among the rows of plant-filled tanks, pipes and equipment. Jenny led us down one of the rows and around a bend.

The plants in the rear quarter weren’t sick—they were dead. They were bleached to a pale yellow, like boiled grass, and limp. Nothing would save them now.

“I’m a biologist, not a botanist—” Jenny began.

Hal grunted sickly. “Yeah. And I’m not a life hormone expert. But there’s one test we can try.”

He picked up a pair of rubber gloves from a rack, and pulled off some wilted stalks. From one of the healthy tanks,

he took green leaves. He mashed the two kinds together on the edge of a bench and watched. "If it's chromazone, they've developed an enzyme by now that should eat the color out of those others."

In about ten seconds, I noticed the change. The green began to bleach before my eyes.

Jenny made a sick sound in her throat and stared at the rows of healthy plants. "I checked the valves, and this sick section is isolated. But—if chromazone got into the chemicals.... Better get your spectroanalyzer out, Hal, while I get Captain Muller. Paul, be a dear and find Hendrix, will you?"

I shook my head, and went further down the rows. "No need, Jenny," I called back. I pointed to the shoe I'd seen sticking out from the edge of one of the tanks. There was a leg attached.

I reached for it, but Lomax shoved me back. "Don't—the enzymes in the corpse are worse than the poison, Paul. Hands off." He reached down with the gloves and heaved. It was Hendrix, all right—a corpse with a face and hands as white as human flesh could ever get. Even the lips were bleached out.

Jenny moaned. "The fool! The stupid fool. He *knew* it was dangerous without gloves; he suspected chromazone, even though none's supposed to be on board. And I warned him . . ."

"Not against this, you didn't," I told her. I dropped to my knees and took another pair of gloves. Hendrix's head rolled under my grasp. The skull was smashed over the left eye, as if someone had taken a sideswipe at Hendrix with a hammer. No fall had produced that. "You should have warned him about his friends. Must have been killed, then dumped in there."

"Murder!" Hal bit the word out in disgust. "You're right, Paul. Not too stupid a way to dispose of the body, either—in another couple of hours, he'd have started dissolving in that stuff, and we'd never have guessed it was murder. That means this poisoning of the plants wasn't an accident. Somebody poisoned the water, then got worried when there wasn't

a report on the plants; must have been someone who thought it worked faster on plants than it does. So he came to investigate, and Hendrix caught him fooling around. So he got killed.”

“But who?” Jenny asked.

I shrugged sickly. “Somebody crazy enough—or desperate enough to turn back that he’ll risk our air and commit murder. You’d better go after the captain while Hal gets his test equipment. I’ll keep watch here.”

It didn’t feel good in hydroponics after they left. I looked at those dead plants, trying to figure whether there were enough left to keep us going. I studied Hendrix’s body, trying to tell myself the murderer had no reason to come back and try to get me.

I reached for a cigarette, and then put the pack back. The air felt almost as close as the back of my neck felt tense and unprotected. And telling myself it was all imagination didn’t help—not with what was in that chamber to keep me company.

II

Muller’s face was like an iceberg when he came down—but only after he saw Hendrix. Before then I’d caught the fat moon-calf expression on his face, and I’d heard Jenny giggling. Damn it, they’d taken enough time. Hal was already back, fussing over things with the hunk of tin and lenses he treated like a newborn baby.

Doc Napier came in behind them, but separately. I saw him glance at them and look sick. Then both Muller and Napier began concentrating on business. Napier bent his nervous, bony figure over the corpse, and stood up almost at once. “Murder all right.”

“So I guessed, Dr. Napier,” Muller growled heavily at him. “Wrap him up and put him between hulls to freeze. We’ll bury him when we land. Tremaine, give a hand with it, will you?”

“I’m not a laborer, Captain Muller!” Napier protested. I

started to tell him where he could get off, too.

But Jenny shook her head at us. "Please. Can't you see Captain Muller is trying to keep too many from knowing about this? I should think you'd be glad to help. Please?"

Put that way, I guess it made sense. We found some rubber sheeting in one of the lockers, and began wrapping Hendrix in it; it wasn't pleasant, since he was beginning to soften up from the enzymes he'd absorbed. "How about going ahead to make sure no one sees us?" I suggested to Jenny.

Muller opened his mouth, but Jenny gave one of her quick little laughs and opened the door for us. Doc looked relieved. I guessed he was trying to kid himself. Personally, I wasn't a fool—I was just hooked; I knew perfectly well she was busy playing us off against one another, and probably having a good time balancing the books. But hell, that's the way life runs.

"Get Pietro up here!" Muller fired after us. She laughed again, and nodded. She went with us until we got to the 'tween-hulls lock, then went off after the chief. She was back with him just as we finished stuffing Hendrix through and sealing up again.

Muller grunted at us when we got back, then turned to Lomax again. The big chemist didn't look happy. He spread his hands toward us, and hunched his shoulders. "A fifty-times over-dose of chromazone in those tanks—fortunately none in the others. And I can't find a trace of it in the fertilizer chemicals or anywhere else. Somebody deliberately put it into those tanks."

"Why?" Pietro asked. We'd filled him in with the rough details, but it still made no sense to him.

"Suppose you tell me, Dr. Pietro," Muller suggested. "Chromazone is a poison most people never heard of. One of the new *scientific* nuisances."

Pietro straightened, and his goatee bristled. "If you're hinting . . ."

"I am *not* hinting, Dr. Pietro. I'm telling you that I'm

confining your group to their quarters until we can clean up this mess, distil the water that's contaminated, and replant. After that, if an investigation shows nothing, I *may* take your personal bond for the conduct of your people. Right now I'm protecting my ship."

"But captain—" Jenny began.

Muller managed a smile at her. "Oh, not you, of course, Jenny. I'll need you here. With Hendrix gone, you're the closest thing we have to a Farmer now."

"Captain Muller," Pietro said sharply. "Captain, in the words of the historical novelists—drop dead! Dr. Sanderson, I forbid you to leave your quarters so long as anyone else is confined to his. I have ample authority for that."

"Under emergency powers—" Muller spluttered over it, and Pietro jumped in again before he could finish.

"Precisely, Captain. Under emergency situations, when passengers aboard a commercial vessel find indications of total irresponsibility or incipient insanity on the part of a ship's officer, they are considered correct in assuming command for the time needed to protect their lives. We were poisoned by food prepared in your kitchen, and were nearly killed by radioactivity through a leak in the engine-room—and no investigation was made. We are now confronted with another situation aimed against our welfare—as the others were wholly aimed at us—and you choose to conduct an investigation against our group only. My only conclusion is that you wish to confine us to quarters so we cannot find your motives for this last outrage. Paul, will you kindly relieve the captain of his position?"

They were both half right, and mostly wrong. Until it was proved that our group was guilty, Muller couldn't issue an order that was obviously discriminatory and against our personal safety in case there was an attack directed on us. He'd be mustered out of space and into the Lunar Cells for that. But on the other hand, the "safety for passengers" clause Pietro was citing applied only in the case of overt, direct and physical

danger by an officer to normal passengers. He might be able to weasel it through a court, or he might be found guilty of mutiny. It left me in a pretty position.

Jenny fluttered around. “Now, now—” she began.

I cut her off. “Shut up, Jenny. And you two damned fools cool down. Damn it, we’ve got an emergency here all right—we may not have air plants enough to live on. Pietro, we can’t run the ship—and neither can Muller get through what’s obviously a mess that may call for all our help by confining us. Why don’t you two go off and fight it out in person?”

Surprisingly, Pietro laughed. “I’m afraid I’d put up a poor showing against the captain, Paul. My apologies, Captain Muller.”

Muller hesitated, but finally took Pietro’s hand, and dropped the issue.

“We’ve got enough plants,” he said, changing the subject. “We’ll have to cut out all smoking and other waste of air. And I’ll need Jenny to work the hydroponics, with any help she requires. We’ve got to get more seeds planted, and fast. Better keep word of this to ourselves. We—”

A shriek came from Jenny then. She’d been busy at one of the lockers in the chamber. Now she began ripping others open and pawing through things inside rubber-gloves. “Captain Muller! The seeds! The seeds!”

Hal took one look, and his face turned gray.

“Chromazone,” he reported. “Every bag of seed has been filled with a solution of chromazone! They’re worthless!”

“How long before the plants here will seed?” Muller asked sharply.

“Three months,” Jenny answered. “Captain Muller, what are we going to do?”

The dour face settled into grim determination. “The only sensible thing. Take care of these plants, conserve the air, and squeeze by until we can reseed. And, Dr. Pietro, with your permission, we’ll turn about for Earth at once. We can’t go on like this. To proceed would be to endanger the life of every

man aboard.”

“Please, Danton.” Jenny put her hand on Pietro’s arm. “I know what this all means to you, but—”

Pietro shook her off. “It means the captain’s trying to get out of the expedition, again. It’s five months back to Earth—more, by the time we kill velocity. It’s the same to Saturn. And either way, in five months we’ve got this fixed up, or we’re helpless. Permission to return refused, Captain Muller.”

“Then if you’ll be so good as to return to your own quarters,” Muller said, holding himself back with an effort that turned his face red, “we’ll start clearing this up. And not a word of this.”

Napier, Lomax, Pietro and I went back to the scientists’ quarters, leaving Muller and Jenny conferring busily. That was at fifteen o’clock. At sixteen o’clock, Pietro issued orders against smoking.

Dinner was at eighteen o’clock. We sat down in silence. I reached for my plate without looking. And suddenly little Phil Riggs was on his feet, raving. “Whole wheat! Nothing but whole wheat bread! I’m sick of it—sick! I won’t—”

“Sit down!” I told him. I’d bitten into one of the rolls on the table. It was white bread, and it was the best the cook had managed so far. There was corn instead of baked beans, and he’d done a fair job of making meat loaf. “Stop making a fool of yourself, Phil.”

He slumped back, staring at the white bun into which he’d bitten. “Sorry. Sorry. It’s this air—so stuffy. I can’t breathe. I can’t see right—”

Pietro and I exchanged glances, but I guess we weren’t surprised. Among intelligent people on a ship of that size, secrets wouldn’t keep. They’d all put bits together and got part of the answer. Pietro shrugged, and half stood up to make an announcement.

“Beg pardon, sirs.” We jerked our heads around to see Bullard standing in the doorway.

He was scared stiff, and his words got stuck in his

throat. Then he found his voice again. “I heard as how Hendrix went crazy and poisoned the plants and went and killed himself and we’ll all die if we don’t find some trick, and what I want to know, please, sirs, is are what they’re saying right and you know all kinds of tricks and can you save us because I can’t go on like this not knowing and hearing them talking outside the galley and none of them telling me—”

Lomax cut into his flood of words. “You’ll live, Bullard. Farmer Hendrix did get killed in an accident to some of the plants, but we’ve still got air enough. Captain Muller has asked the help of a few of us, but it’s only a temporary emergency.”

Bullard stared at him, and slowly some of the fear left his face—though not all of it. He turned and left with a curt bow of his head, while Pietro added a few details that weren’t exactly lies to Lomax’s hasty cover-up, along with a grateful glance at the chemist. It seemed to work, for the time being—at least enough for Riggs to begin making nasty remarks about cooked paste.

Then the tension began to build again. I don’t think any of the crew talked to any of our group. And yet, there seemed to be a chain of rumor that exchanged bits of information. Only the crew could have seen the dead plants being carried down to our refuse breakdown plant; and the fact it was chromazone poisoning must have been deduced from a description by some of our group. At any rate, both groups knew all about it—and a little bit more, as was usual with rumors—by the second day.

Muller should have made the news official, but he only issued an announcement that the danger was over. When Peters, our radioman-navigator, found Sam and Phil Riggs smoking and dressed them down, it didn’t make Muller’s words seem too convincing. I guessed that Muller had other things on his mind; at least he wasn’t in his cabin much, and I didn’t see Jenny for two whole days.

My nerves were as jumpy as those of the rest. It isn’t too bad cutting out smoking; a man can stand imagining the

air is getting stale; but when every unconscious gesture toward cigarettes that aren't there reminds him of the air, and when every imagined stale stench makes him want a cigarette to relax, it gets a little rough.

Maybe that's why I was in a completely rotten mood when I finally did spot Jenny going down the passage, with the tight coveralls she was wearing emphasizing every motion of her hips. I grabbed her and swung her around. "Hi, stranger. Got time for a word?"

She sort of brushed my hand off her arm, but didn't seem to mind it. "Why, I guess so, Paul. A little time. Captain Muller's watching the 'ponics."

"Good," I said, trying to forget Muller. "Let's make it a little more private than this, though. Come on in."

She lifted an eyebrow at the open door of my cabin, made with a little giggle, and stepped inside. I followed her, and kicked the door shut. She reached for it, but I had my back against it.

"Paul!" She tried to get around me, but I wasn't having any. I pushed her back onto the only seat in the room, which was the bunk. She got up like a spring uncoiling. "Paul Tremaine, you open that door. You know better than that. Paul, please!"

"What makes me any different than the others? You spend plenty of time in Muller's cabin—and you've been in Pietro's often enough. Probably Doc Napier's, too!"

Her eyes hardened, but she decided to try the patient and reason-with-the-child line. "That is different. Captain Muller and I have a great deal of business to work out."

"Sure. And he looks great in lipstick!"

It was a shot in the dark, but it went home. I wished I'd kept my darned mouth shut; before I'd been suspecting it—now I knew. She turned pink and tried to slap me, which won't work when the girl is sitting on a bunk and I'm on my feet. "You mind your own business!"

"I'm doing that. Generations should stick together, and

he's old enough to be your father!"

She leaned back and studied me. Then she smiled slowly, and something about it made me sick inside. "I like older men, Paul. They make people my own age seem so callow, so unfinished. It's so comforting to have mature people around. I always did have an Electra complex."

"The Greeks had plenty of names for it, kid," I told her. "Don't get me wrong. If you want to be a slut, that's your own business. But when you pull the innocent act on me, and then fall back to sophomore psychology—"

This time she stood up before she slapped. Before her hand stung my face, I was beginning to regret what I'd said. Afterwards, I didn't give a damn. I picked her up off the floor, slapped her soundly on the rump, pulled her tight against me, and kissed her. She tried scratching my face, then went passive, and wound up with one arm around my neck and the other in the hair at the back of my head. When I finally put her down she sank back onto the bunk, breathing heavily.

"Why, Paul!" And she reached out her arms as I came down to meet them. For a second, the world looked pretty good.

Then a man's hoarse scream cut through it all, with the sound of heavy steps in panic flight. I jerked up. Jenny hung on. "Paul.... Paul...." But there was the smell of death in the air, suddenly. I broke free and was out into the corridor. The noise seemed to come from the shaft that led to the engine room, and I jumped for it, while I heard doors slam.

This time, there was a commotion, like a wet sack being tossed around in a pentagonal steel barrel, and another hoarse scream that cut off in the middle to a gargling sound.

I reached the shaft and started down the center rail, not bothering with the hand-grips. I could hear something rustle below, followed by silence, but I couldn't see a thing; the lights had been cut.

I could feel things poking into my back before I landed; I always get the creeps when there's death around, and that

last sound had been just that—somebody's last sound. I *knew* somebody was going to kill me before I could find the switch. Then I stumbled over something, and my hair stood on end. I guess my own yell was pretty horrible. It scared me worse than I was already. But my fingers found the switch somehow, and the light flashed on.

Sam lay on the floor, with blood still running from a wide gash across his throat. A big kitchen knife was still stuck in one end of the horrible wound. And one of his fingers was half sliced off where the blade of a switch-blade shiv had failed on him and snapped back.

Something sounded above me, and I jerked back. But it was Captain Muller, coming down the rail. The man had obviously taken it all in on the way down. He jerked the switch-blade out of Sam's dead grasp and looked at the point of the knife. There was blood further back from the cut finger, but none on the point.

"Damn!" Muller tossed it down in disgust. "If he'd scratched the other man, we'd have had a chance to find who it was. Tremaine, have you got an alibi?"

"I was with Jenny," I told him, and watched his eyes begin to hate me. But he nodded. We picked Sam up together and lugged his body up to the top of the shaft, where the crowd had collected. Pietro, Peters, the cook, Grundy and Lomax were there. Beyond them, the dark-haired, almost masculine head of Eve Nolan showed, her eyes studying the body of Sam as if it were a negative in her darkroom; as usual, Bill Sanderson was as close to her as he could get. But there was no sign now of Jenny. I glanced up the corridor but saw only Wilcox and Phil Riggs, with Walt Harris trailing them, rubbing the sleep out of his eyes.

Muller moved directly to Pietro. "Six left in my crew now, Dr. Pietro. First Hendrix, now Sam. Can you still say that the attack is on *your* crew—when mine keep being killed? This time, sir, I demand . . ."

"Give 'em hell, Captain," ape-man Grundy broke in.

“Cut the fancy stuff, and let’s get the damned murdering rats!”

Muller’s eyes quartered him, spitted his carcass, and began turning him slowly over a bed of coals. “Mister Grundy, I am master of the *Wahoo*. I fail to remember asking for your piratical advice. Dr. Pietro, I trust you will have no objections if I ask Mr. Peters to investigate your section and group thoroughly?”

“None at all, Captain Muller,” Pietro answered. “I trust Peters. And I feel sure you’ll permit me to delegate Mr. Tremaine to inspect the remainder of the ship?”

Muller nodded curtly. “Certainly. Until the madman is found, we’re all in danger. And unless he is found, I insist I must protect my crew and my ship by turning back to Earth.”

“I cannot permit that, sir!”

“Your permission for that was not requested, Dr. Pietro! Yes, Bullard?”

The cook had been squirming and muttering to himself for minutes. Now he darted out toward Grundy, and his finger pointed to Lomax. “He done it! I seen him. Killed the only friend I had, he did. They went by my galley—and—and he grabbed my big knife, that one there. And he killed Sam.”

“You’re sure it was Lomax?” Muller asked sharply.

“Sure I’m sure. Sam, he was acting queer lately. He was worried. Told me he saw something, and he was going to know for sure. He borrowed my switch-blade knife that my wife gave me. And he went out looking for something. Then I heard him a-running, and I looked up, and there was this guy, chasing him. Sure, I seen him with my own eyes.”

Eve Nolan chuckled throatily, throwing her manish-cut hair back from her face. She was almost pretty with an expression on her countenance, even if it was amused disgust. “Captain Muller, that’s a nice story. But Dr. Lomax was with me in my darkroom, working on some spectroanalysis slides. Bill Sanderson and Phil Riggs were waiting outside for us. And Mr. Peters saw us come out together when we all ran down here.”

Peters nodded. Muller stared at us for a second, and the hunting lust died out of his eyes, leaving them blank and cold. He turned to Bullard. "Bullard, an explanation might make me reduce your punishment. If you have anything to say, say it now!"

The cook was gibbering and actually drooling with fear. He shook, and sweat popped out all over him. "My knife—I hadda say something. They stole my knife. They wanted it to look like I done it. God, Captain, you'da done the same. Can't punish a man for trying to save his life. I'm a good man, I am. Can't whip a good man! Can't—"

"Give him twenty-five lashes with the wire, Mr. Grundy," Muller said flatly.

Pietro let out a shriek on top of the cook's. He started forward, but I caught him. "Captain Muller's right," I told him. "On a spaceship, the full crew is needed. The brig is useless, so the space-enabling charter recognizes flogging. Something is needed to maintain discipline."

Pietro dropped back reluctantly, but Lomax faced the captain. "The man is a coward, hardly responsible, Captain Muller. I'm the wounded party in this case, but it seems to me that hysteria isn't the same thing as maliciousness. Suppose I ask for clemency?"

"Thank you, Dr. Lomax," Muller said, and actually looked relieved. "Make it ten lashes, Mr. Grundy. Apparently no real harm has been done, and he will not testify in the future."

Grundy began dragging Bullard out, muttering about damn fool groundlubbers always sticking their noses in. The cook caught at Lomax's hand on the way, literally slobbering over it. Lomax rubbed his palm across his thigh, looking embarrassed.

Muller turned back to us. "Very well. Mr. Peters will begin investigating the expedition staff and quarters; Mr. Tremaine will have free run over the rest of the ship. And if the murderer is not turned up in forty-eight hours, we head

back to Earth!”

Pietro started to protest again, but another scream ripped down the corridor, jerking us all around. It was Jenny, running toward us. She was breathing hoarsely as she nearly crashed into Dr. Pietro.

Her face was white and sick, and she had to try twice before she could speak.

“The plants!” she gasped out. “Poison! They’re dying!”

III

It was chromazone again. Muller had kept most of the gang from coming back to hydroponics, but he, Jenny, Pietro, Wilcox and myself were enough to fill the room with the smell of sick fear. Now less than half of the original space was filled with healthy plants. Some of the tanks held plants already dead, and others were dying as we watched; once beyond a certain stage, the stuff acted almost instantly—for hours there was only a slight indication of something wrong, and then suddenly there were the dead, bleached plants.

Wilcox was the first to speak. He still looked like some nattily dressed hero of a space serial, but his first words were ones that could never have gone out on a public broadcast. Then he shrugged. “They must have been poisoned while we were all huddled over Sam’s body. Who wasn’t with us?”

“Nonsense,” Pietro denied. “This was done at least eighteen hours ago, maybe more. We’d have to find who was around then.”

“Twenty hours, or as little as twelve,” Jenny amended. “It depends on the amount of the dosage, to some extent. And....” She almost managed to blush. “Well, there have been a lot of people around. I can’t even remember. Mr. Grundy and one of the men, Mr. Wilcox, Dr. Napier—oh, I don’t know!”

Muller shook his head in heavy agreement. “Naturally. We had a lot of work to do here. After word got around about Hendrix, we didn’t try to conceal much. It might have happened when someone else was watching, too. The important thing, gentlemen, is that now we don’t have reserve enough to

carry us to Saturn. The plants remaining can't handle the air for all of us. And while we ship some reserve oxygen...."

He let it die in a distasteful shrug. "At least this settles one thing. We have no choice now but to return to Earth!"

"Captain Muller," Pietro bristled quickly, "that's getting to be a monomania with you. I agree we are in grave danger. I don't relish the prospect of dying any more than you do—perhaps less, in view of certain peculiarities! But it's now further back to Earth than it is to Saturn. And before we can reach either, we'll have new plants—or we'll be dead!"

"Some of us will be dead, Dr. Pietro," Wilcox amended it. "There are enough plants left to keep some of us breathing indefinitely."

Pietro nodded. "And I suppose, in our captain's mind, that means the personnel of the ship can survive. Captain Muller, I must regard your constant attempt to return to Earth as highly suspicious in view of this recurrent sabotage of the expedition. Someone here is apparently either a complete madman or so determined to get back that he'll resort to anything to accomplish his end. And you have been harping on returning over and over again!"

Muller bristled, and big heavy fist tightened. Then he drew himself up to his full dumpy height. "Dr. Pietro," he said stiffly, "I am as responsible to my duties as any man here—and my duties involve protecting the life of every man and woman on board; if you wish to return, I shall be *most* happy to submit this to a formal board of inquiry. I—"

"Just a minute," I told them. "You two are forgetting that we've got a problem here. Damn it, I'm sick of this fighting among ourselves. We're a bunch of men in a jam, not two camps at war now. I can't see any reason why Captain Muller would want to return that badly."

Muller nodded slightly. "Thank you, Mr. Tremaine. However, for the record, and to save you trouble investigating there is a good reason. My company is now building a super-liner; if I were to return within the next six months, they'd

promote me to captain of that ship—a considerable promotion, too.”

For a moment, his honesty seemed to soften Pietro. The scientist mumbled some sort of apology, and turned to the plants. But it bothered me; if Muller had pulled something, the smartest thing he could have done would be to have said just what he did.

Besides, knowing that Pietro’s injunction had robbed him of a chance like that was enough to rankle in any man’s guts and make him work up something pretty close to insanity. I marked it down in my mental files for the investigation I was supposed to make, but let it go for the moment.

Muller stood for a minute longer, thinking darkly about the whole situation. Then he moved toward the entrance to hydroponics and pulled out the ship speaker mike. “All hands and passengers will assemble in hydroponics within five minutes,” he announced. He swung toward Pietro. “With your permission, Doctor,” he said caustically.

The company assembled later looked as sick as the plants. This time, Muller was hiding nothing. He outlined the situation fully; maybe he shaded it a bit to throw suspicion on our group, but in no way we could pin down. Finally he stated flatly that the situation meant almost certain death for at least some of those aboard.

“From now on, there’ll be a watch kept. This is closed to everyone except myself, Dr. Pietro, Mr. Peters, and Dr. Jenny Sanderson. At least one of us will be here at all times, equipped with gas guns. Anyone else is to be killed on setting foot inside this door!” He swung his eyes over the group. “Any objections?”

Grundy stirred uncomfortably. “I don’t go for them science guys up here. Takes a crazy man to do a thing like this, and everybody knows....”

Eve Nolan laughed roughly. “Everybody knows you’ve been swearing you won’t go the whole way, Grundy. These jungle tactics should be right up your alley.”

“That’s enough,” Muller cut through the beginnings of the hassle. “I trust those I appointed—at least more than I do the rest of you. The question now is whether to return to Earth at once or to go on to Saturn. We can’t radio for help for months yet. We’re not equipped with sharp beams, we’re low powered, and we’re off the lanes where Earth’s pick-ups hunt. Dr. Pietro wants to go on, since we can’t get back within our period of safety; I favor returning, since there is no proof that this danger will end with this outrage. We’ve agreed to let the result of a vote determine it.”

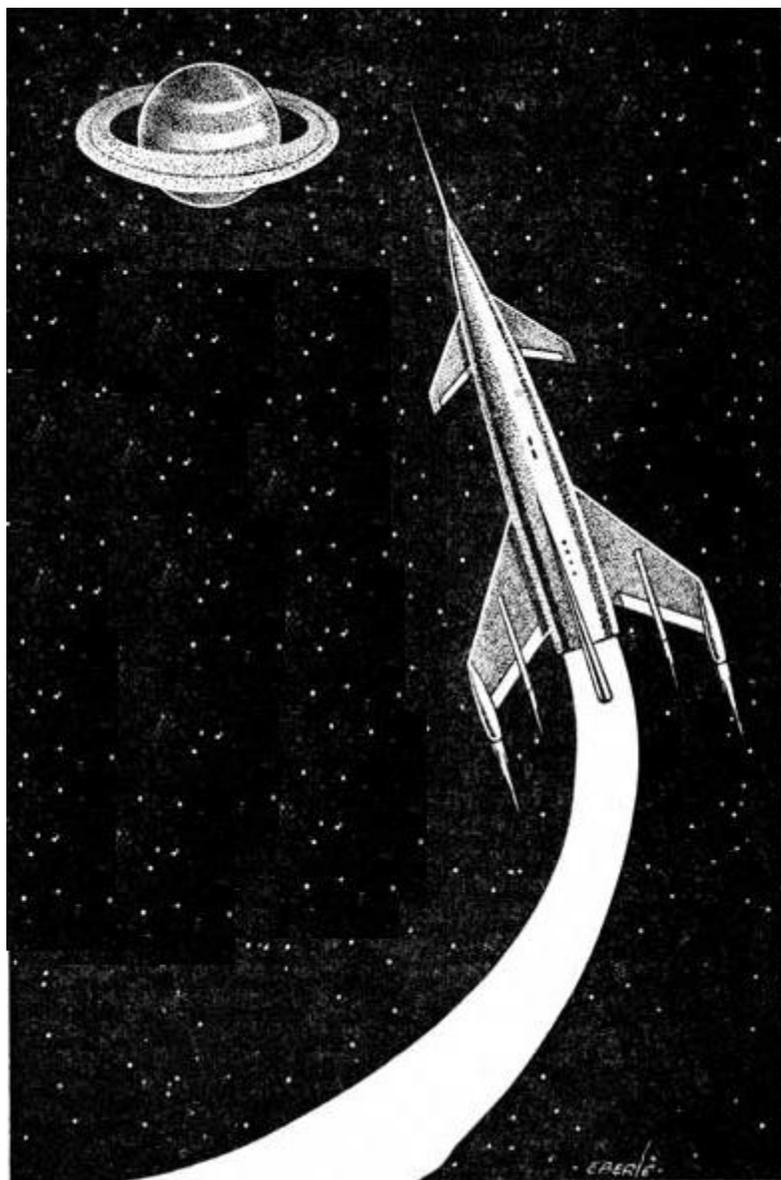
Wilcox stuck up a casual hand, and Muller nodded to him. He grinned amiably at all of us. “There’s a third possibility, Captain. We can reach Jupiter in about three months, if we turn now. It’s offside, but closer than anything else. From there, on a fast liner, we can be back on Earth in another ten days.”

Muller calculated, while Peters came up to discuss it. Then he nodded. “Saturn or Jupiter, then. I’m not voting, of course. Bullard is disqualified to vote by previous acts.” He drew a low moan from the sick figure of Bullard for that, but no protest. Then he nodded. “All those in favor of Jupiter, your right hands please!”

I counted them, wondering why my own hand was still down. It made some sort of sense to turn aside now. But none of our group was voting—and all the others had their hands up, except for Dr. Napier. “Seven,” Muller announced. “Those in favor of Saturn.”

Again, Napier didn’t vote. I hesitated, then put my hand up. It was crazy, and Pietro was a fool to insist. But I knew that he’d never get another chance if this failed, and...

“Eight,” Muller counted. He sighed, then straightened. “Very well, we go on. Dr. Pietro, you will have my full support from now on. In return, I’ll expect every bit of help in meeting this emergency. Mr. Tremaine was correct; we cannot remain camps at war.”



Pietro's goatee bobbed quickly, and his hand went out. But while most of the scientists were nodding with him, I caught the dark scowl of Grundy, and heard the mutters from the deckhands and the engine men. If Muller could get them to cooperate, he was a genius.

Pietro faced us, and his face was serious again. "We can hasten the seeding of the plants a little, I think, by temperature and light-and-dark cycle manipulations. Unfortunately, these aren't sea-algae plants, or we'd be in comparatively little trouble. That was my fault in not converting. We can, however, step up their efficiency a bit. And I'm sure we can find some way to remove the carbon dioxide from the air."

"How about oxygen to breathe?" Peters asked.

"That's the problem," Pietro admitted. "I was wondering about electrolyzing water."

Wilcox bobbed up quickly. "Can you do it on AC current?"

Lomax shook his head. "It takes DC."

"Then that's out. We run on 220 AC. And while I can rectify a few watts, it wouldn't be enough to help. No welders except monatomic hydrogen torches, even."

Pietro looked sicker than before. He'd obviously been counting on that. But he turned to Bullard. "How about seeds? We had a crop of tomatoes a month ago—and from the few I had, they're all seed. Are any left?"

Bullard rocked from side to side, moaning. "Dead. We're all gonna be dead. I told him, I did, you take me out there, I'll never get back. I'm a good man, I am. I wasn't never meant to die way out here. I—I—"

He gulped and suddenly screamed. He went through the door at an awkward shuffle, heading for his galley. Muller shook his head, and turned toward me. "Check up, will you, Mr. Tremaine? And I suggest that you and Mr. Peters start your investigation at once. I understand that chromazone would require so little hiding space that there's no use searching for it. But if you can find any evidence, report it at once."

Peters and I left. I found the galley empty. Apparently Bullard had gone to lie on his stomach in his bunk and nurse his terror. I found the freezer compartments, though—and the tomatoes. There must have been a bushel of them, but Bullard had followed his own peculiar tastes. From the food he served, he couldn't stand fresh vegetables; and he'd cooked the tomatoes down thoroughly and run them through the dehydrator before packing them away!

It was a cheerful supper, that one! Bullard had half-recovered and his fear was driving him to try to be nice to us. The selection was good, beyond the inevitable baked beans; but he wasn't exactly a chef at best, and his best was far behind him. Muller had brought Wilcox, Napier and Peters down to our mess with himself, to consolidate forces, and it seemed that he was serious about cooperating. But it was a little late for that.

Overhead, the fans had been stepped up to counteract the effect of staleness our minds supplied. But the whine of the motors kept reminding us our days were counted. Only Jenny was normal; she sat between Muller and Pietro, where she could watch my face and that of Napier. And even her giggles had a forced sound.

There were all kinds of things we could do—in theory. But we didn't have that kind of equipment. The plain fact was that the plants were going to lose the battle against our lungs. The carbon dioxide would increase, speeding up our breathing, and making us all seem to suffocate. The oxygen would grow thinner and thinner, once our supplies of bottled gas ran out. And eventually, the air wouldn't support life.

"It's sticky and hot," Jenny complained, suddenly.

"I stepped up the humidity and temperature controls," I told her. She nodded in quick comprehension, but I went on for Muller's benefit. "Trying to give the plants the best growing atmosphere. We'll feel just as hot and sticky when the carbon dioxide goes up, anyhow."

"It must already be up," Wilcox said. "My two canaries

are breathing faster.”

“Canaries,” Muller said. He frowned, though he must have known of them. It was traditional to keep them in the engine-room, though the reason behind it had long since been lost. “Better kill them, Mr. Wilcox.”

Wilcox jerked, and his face paled a bit. Then he nodded. “Yes, sir!”

That was when I got scared. The idea that two birds breathing could hurt our chances put things on a little too vivid a basis. Only Lomax seemed unaffected. He shoved back now, and stood up.

“Some tests I have to make, Captain. I have an idea that might turn up the killer among us!”

I had an idea he was bluffing, but I kept my mouth shut. A bluff was as good as anything else, it seemed.

At least, it was better than anything I seemed able to do. I prowled over the ship, sometimes meeting Peters doing the same, but I couldn’t find a bit of evidence. The crewmen sat watching with hating eyes. And probably the rest aboard hated and feared us just as much. It wasn’t hard to imagine the man who was behind it all deciding to wipe one of us out. My neck got a permanent crimp from keeping one eye behind me. But there wasn’t a shred of evidence I could find.

In two more days, we began to notice the stuffiness more. My breathing went up enough to notice. Somehow, I couldn’t get a full breath. And the third night, I woke up in the middle of my sleep with the feeling something was sitting on my chest; but since I’d taken to sleeping with the light on, I saw that it was just the stuffiness that was bothering me. Maybe most of it had been psychological up until then. But that was the real thing.

The nice part of it was that it wouldn’t be sudden—we’d have days to get closer and closer to death; and days for each one to realize a little more that every man who wasn’t breathing would make it that much easier for the rest of us. I caught myself thinking of it when I saw Bullard or Grundy.

Then trouble struck again. I was late getting to the scene this time, down by the engine room. Muller and Bill Sanderson were ahead of me, trying to separate Hal Lomax and Grundy, and not doing so well. Lomax brought up a haymaker as I arrived, and started to shout something. But Grundy was out of Muller's grasp, and up, swinging a wrench. It connected with a dull thud, and Lomax hit the floor, unconscious.

I picked Grundy up by the collar of his jacket, heaved him around and against a wall, where I could get my hand against his esophagus and start squeezing. His eyeballs popped, and the wrench dropped from his hands. When I get mad enough to act that way, I usually know I'll regret it later. This time it felt good, all the way. But Muller pushed me aside, waiting until Grundy could breathe again.

"All right," Muller said. "I hope you've got a good explanation, before I decide what to do with you."

Grundy's eyes were slitted, as if he'd been taking some of the Venus drugs. But after one long, hungry look at me, he faced the captain. "Yes, sir. This guy came down here ahead of me. Didn't think nothing of it, sir. But when he started fiddling with the panel there, I got suspicious." He pointed to the external control panel for the engine room, to be used in case of accidents. "With all that's been going on, how'd I know but maybe he was gonna dump the fuel? And then I seen he had keys. I didn't wait, sir. I jumped him. And then you come up."

Wilcox came from the background and dropped beside the still figure of Lomax. He opened the man's left hand and pulled out a bunch of keys, examining them. "Engine keys, Captain Muller. Hey—it's my set! He must have lifted them from my pocket. It looks as if Grundy's found our killer!"

"Or Lomax found him!" I pointed out. "Anybody else see this start, or know that Lomax didn't get those keys away from Grundy, when *he* started trouble?"

"Why, you—" Grundy began, but Wilcox cut off his run. It was a shame. I still felt like pushing the man's Adam's apple through his medulla oblongata.

“Lock them both up, until Dr. Lomax comes to,” Muller ordered. “And send Dr. Napier to take care of him. I’m not jumping to any conclusions.” But the look he was giving Lomax indicated that he’d already pretty well made up his mind. And the crew was positive. They drew back sullenly, staring at us like animals studying a human hunter, and they didn’t like it when Peters took Grundy to lock him into his room. Muller finally chased them out, and left Wilcox and me alone.

Wilcox shrugged wryly, brushing dirt off his too-clean uniform. “While you’re here, Tremaine, why not look my section over? You’ve been neglecting me.”

I’d borrowed Muller’s keys and inspected the engine room from, top to bottom the night before, but I didn’t mention that. I hesitated now; to a man who grew up to be an engineer and who’d now gotten over his psychosis against space too late to start over, the engines were things better left alone. Then I remembered that I hadn’t seen Wilcox’s quarters, since he had the only key to them.

I nodded and went inside. The engines were old, and the gravity generator was one of the first models. But Wilcox knew his business. The place was slick enough, and there was the good clean smell of metal working right. I could feel the controls in my hands, and my nerves itched as I went about making a perfunctory token examination. I even opened the fuel lockers and glanced in. The two crewmen watched with hard eyes, slitted as tight as Grundy’s, but they didn’t bother me. Then I shrugged, and went back with Wilcox to his tiny cabin.

I was hit by the place before I got inside. Tiny, yes, but fixed up like the dream of every engineer. Clean, neat, filled with books and luxuries. He even had a tape player I’d seen on sale for a trifle over three thousand dollars. He turned it on, letting the opening bars of Haydn’s Oxford Symphony come out. It was a binaural, ultra-fidelity job, and I could close my eyes and feel the orchestra in front of me.

This time I was thorough, right down the line, from the cabinets that held luxury food and wine to the little drawer

where he kept his dress-suit studs; they might have been rutiles, but I had a hunch they were genuine catseyes.

He laughed when I finished, and handed me a glass of the first decent wine I'd tasted in months. "Even a small ozonator to make the air seem more breathable, and a dehumidifier, Tremaine. I like to live decently. I started saving my money once with the idea of getting a ship of my own—" There was a real dream in his eyes for a second. Then he shrugged. "But ships got bigger and more expensive. So I decided to live. At forty, I've got maybe twenty years ahead here, and I mean to enjoy it. And—well, there are ways of making a bit extra...."

I nodded. So it's officially smuggling to carry a four-ounce Martian fur to Earth where it's worth a fortune, considering the legal duty. But most officers did it now and then. He put on Sibelius' Fourth while I finished the wine. "If this mess is ever over, Paul, or you get a chance, drop down," he said. "I like a man who knows good things—and I liked your reaction when you spotted that Haydn for Hohmann's recording. Muller pretends to know music, but he likes the flashiness of Möhlwehr."

Hell, I'd cut my eye teeth on that stuff; my father had been first violinist in an orchestra, and had considered me a traitor when I was born without perfect pitch. We talked about Sibelius for awhile, before I left to go out into the stinking rest of the ship. Grundy was sitting before the engines, staring at them. Wilcox had said the big ape liked to watch them move ... but he was supposed to be locked up.

I stopped by Lomax's door; the shutter was open, and I could see the big man writhing about, but he was apparently unconscious. Napier came back from somewhere, and nodded quickly.

"Concussion," he said. "He's still out, but it shouldn't be too serious."

"Grundy's loose." I'd expected surprise, but there was none. "Why?"

He shrugged. "Muller claimed he needed his mate free

to handle the crew, and that there was no place the man could go. I think it was because the men are afraid they'll be outnumbered by your group." His mouth smiled, but it was suddenly bitter. "Jenny talked Pietro into agreeing with Muller."

Mess was on when I reached the group. I wasn't hungry. The wine had cut the edge from my appetite, and the slow increase of poison in the air was getting me, as it was the others. Sure, carbon dioxide isn't a real poison—but no organism can live in its own waste, all the same. I had a rotten headache. I sat there playing a little game I'd invented—trying to figure which ones I'd eliminate if some had to die. Jenny laughed up at Muller, and I added him to the list. Then I changed it, and put her in his place. I was getting sick of the little witch, though I knew it would be different if she'd been laughing up at me. And then, because of the sick-calf look on Bill Sander-son's face as he stared at Eve, I added him, though I'd always liked the guy. Eve, surprisingly, had as many guys after her as Jenny; but she didn't seem interested. Or maybe she did—she'd pulled her hair back and put on a dress that made her figure look good. Either flattery was working, or she was entering into the last-days feeling most of us had.

Napier came in and touched my shoulder. "Lomax is conscious, and he's asking for you," he said, too low for the others to hear.

I found the chemist conscious, all right, but sick—and scared. His face winced, under all the bandages, as I opened the door. Then he saw who it was, and relaxed. "Paul—what happened to me? The last I remember is going up to see that second batch of plants poisoned. But—well, this is something I must have got later..."

I told him, as best I could. "But don't you remember anything?"

"Not a thing about that. It's the same as Napier told me, and I've been trying to remember. Paul, you don't think—?"

I put a hand on his shoulder and pushed him back gently. "Don't be a damned fool, Hal. I know you're no killer."

“But somebody is, Paul. Somebody tried to kill me while I was unconscious!”

He must have seen my reaction. “They did, Paul. I don’t know how I know—maybe I almost came to—but somebody tried to poke a stick through the door with a knife on it. They want to kill me.”

I tried to calm him down until Napier came and gave him a sedative. The doctor seemed as sick about Hal’s inability to remember as I was, though he indicated it was normal enough in concussion cases. “So is the hallucination,” he added. “He’ll be all right tomorrow.”

In that, Napier was wrong. When the doctor looked in on him the next time, the big chemist lay behind a door that had been pried open, with a long galley knife through his heart. On the bloody sheet, his finger had traced something in his own blood.

“It was....” But the last “s” was blurred, and there was nothing more.

IV

I don’t know how many were shocked at Hal’s death, or how many looked around and counted one less pair of lungs. He’d never been one of the men I’d envied the air he used, though, and I think most felt the same. For awhile, we didn’t even notice that the air was even thicker.

Phil Riggs broke the silence following our inspection of Lomax’s cabin. “That damned Bullard! I’ll get him, I’ll get him as sure as he got Hal!”

There was a rustle among the others, and a suddenly crystallized hate on their faces. But Muller’s hoarse shout cut through the babble that began, and rose over even the anguished shrieking of the cook. “Shut up, the lot of you! Bullard couldn’t have committed the other crimes. Any one of you is a better suspect. Stop snivelling, Bullard, this isn’t a lynching mob, and it isn’t going to be one!”

“What about Grundy?” Walt Harris yelled.

Wilcox pushed forward. “Grundy couldn’t have done it.

He's the logical suspect, but he was playing rummy with my men."

The two engine men nodded agreement, and we began filing back to the mess hall, with the exception of Bullard, who shoved back into a niche, trying to avoid us. Then, when we were almost out of his sight, he let out a shriek and came blubbering after us.

I watched them put Hal Lomax's body through the 'tween-hulls lock, and turned toward the engine room; I could use some of that wine, just as the ship could have used a trained detective. But the idea of watching helplessly while the engines purred along to remind me I was just a handyman for the rest of my life got mixed up with the difficulty of breathing the stale air, and I started to turn back. My head was throbbing, and for two cents I'd have gone out between the hulls beside Lomax and the others and let the foul air spread out there and freeze....

The idea was slow coming. Then I was running back toward the engines. I caught up with Wilcox just before he went into his own quarters. "Wilcox!"

He swung around casually, saw it was me, and motioned inside. "How about some Bartok, Paul? Or would you rather soothe your nerves with some first-rate Buxtehude organ...."

"Damn the music," I told him. "I've got a wild idea to get rid of this carbon dioxide, and I want to know if we can get it working with what we've got."

He snapped to attention at that. Half-way through my account, he fished around and found a bottle of Armagnac. "I get it. If we pipe our air through the passages between the hulls on the shadow side, it will lose its heat in a hurry. And we can regulate its final temperature by how fast we pipe it through—just keep it moving enough to reach the level where carbon dioxide freezes out, but the oxygen stays a gas. Then pass it around the engines—we'll have to cut out the normal cooling set-up, but that's okay—warm it up.... Sure, I've got equipment enough for that. We can set it up in a day. Of

course, it won't give us any more oxygen, but we'll be able to breathe what we have. To success, Paul!"

I guess it was good brandy, but I swallowed mine while calling Muller down, and never got to taste it.

It's surprising how much easier the air got to breathe after we'd double-checked the idea. In about fifteen minutes, we were all milling around in the engine room, while Wilcox checked through equipment. But there was no question about it. It was even easier than we'd thought. We could simply bypass the cooling unit, letting the engine housings stay open to the between-hulls section; then it was simply a matter of cutting a small opening into that section at the other end of the ship and installing a sliding section to regulate the amount of air flowing in. The exhaust from the engine heat pumps was reversed, and run out through a hole hastily knocked in the side of the wall.

Naturally, we let it flow too fast at first. Space is a vacuum, which means it's a good insulator. We had to cut the air down to a trickle. Then Wilcox ran into trouble because his engines wouldn't cool with that amount of air. He went back to supervise a patched-up job of splitting the coolers into sections, which took time. But after that, we had it.

I went through the hatch with Muller and Pietro. With air there there was no need to wear space suits, but it was so cold that we could take it for only a minute or so. That was long enough to see a faint, fine mist of dry ice snow falling. It was also long enough to catch a sight of the three bodies there. I didn't enjoy that, and Pietro gasped. Muller grimaced. When we came back, he sent Grundy in to move the bodies to a hull-section where our breathing air wouldn't pass over them. It wasn't necessary, of course. But somehow, it seemed important.

By lunch, the air seemed normal. We shipped only pure oxygen at about three pounds pressure, instead of loading it with a lot of useless nitrogen. With the carbon dioxide cut back to normal levels, it was as good as ever. The only difference

was that the fans had to be set to blow in a different pattern. We celebrated, and even Bullard seemed to have perked up. He dug out pork chops and almost succeeded in making us corn-bread out of some coarse flour I saw him pouring out of the food chopper. He had perked up enough to bewail the fact that all he had was canned spinach instead of turnip greens.

But by night, the temper had changed—and the food indicated it again. Bullard's cooking was turning into a barometer of the psychic pressure. We'd had time to realize that we weren't getting something for nothing. Every molecule of carbon-dioxide that crystallized out took two atoms of oxygen with it, completely out of circulation.

We were also losing water-vapor, we found; normally, any one of our group knew enough science to know that the water would fall out before the carbon dioxide, but we hadn't thought of it. We took care of that, however, by having Wilcox weld in a baffle and keep the section where the water condensed separate from the carbon dioxide snowfall. We could always shovel out the real ice, and meantime the ship's controls restored the moisture to the air easily enough.

But there was nothing we could do about the oxygen. When that was gone, it stayed gone. The plants still took care of about two-thirds of our waste—but the other third was locked out there between the hulls. Given plants enough, we could have thawed it and let them reconvert it; a nice idea, except that we had to wait three months to take care of it, if we lived that long.

Bullard's cooking began to get worse. Then suddenly, we got one good meal. Eve Nolan came down the passage to announce that Bullard was making cake, with frosting, canned huckleberry pie, and all the works. We headed for the mess hall, fast.

It was the cook's masterpiece. Muller came down late, though, and regarded it doubtfully. "There's something funny," he said as he settled down beside me. Jenny had been surrounded by Napier and Pietro. "Bullard came up babbling a

few minutes ago. I don't like it. Something about eating hearty, because he'd saved us all, forever and ever. He told me the angels were on our side, because a beautiful angel with two halos came to him in his sleep and told him how to save us. I chased him back to the galley, but I don't like it."

Most of them had already eaten at least half of the food, but I saw Muller wasn't touching his. The rest stopped now, as the words sank in, and Napier looked shocked. "No!" he said, but his tone wasn't positive. "He's a weakling, but I don't think he's insane—not enough to poison us."

"There was that food poisoning before," Pietro said suddenly. "Paul, come along. And don't eat anything until we come back."

We broke the record getting to the galley. There Bullard sat, beaming happily, eating from a huge plate piled with the food he had cooked. I checked on it quickly—and there wasn't anything he'd left out. He looked up, and his grin widened foolishly.

"Hi, docs," he said. "Yes, sir, I knowed you'd be coming. It all came to me in a dream. Looked just like my wife twenty years ago, she did, with green and yellow halos. And she told it to me. Told me I'd been a good man, and nothing was going to happen to me. Not to good old Emery Bullard. Had it all figured out."

He speared a big forkful of food and crammed it into his mouth, munching noisily. "Had it all figured. Pop-corn. Best damned pop-corn you ever saw, kind they raise not fifty miles from where I was born. You know, I didn't useta like you guys. But now I love everybody. When we get to Saturn, I'm gonna make up for all the times I didn't give you pop-corn. We'll pop and we'll pop. And beans, too. I useta hate beans. Always beans on a ship. But now we're saved, and I love beans!"

He stared after us, half coming out of his seat. "Hey, docs, ain't you gonna let me tell you about it?"

"Later, Bullard," Pietro called back. "Something just came up. We want to hear all about it."

Inside the mess hall, he shrugged. “He’s eating the food himself. If he’s crazy, he’s in a happy stage of it. I’m sure he isn’t trying to poison us.” He sat down and began eating, without any hesitation.

I didn’t feel as sure, and suspected he didn’t. But it was too late to back out. Together, we summarized what he’d told us, while Napier puzzled over it. Finally the doctor shrugged. “Visions. Euphoria. Disconnection with reality. Apparently something of a delusion that he’s to save the world. I’m not a psychiatrist, but it sounds like insanity to me. Probably not dangerous. At least, while he wants to save us, we won’t have to worry about the food. Still....”

Wilcox mulled it over, and resumed the eating he had neglected before.

“Grundy claimed he’d been down near the engine room, trying to get permission to pop something in the big pile. I thought Grundy was just getting his stories mixed up. But—pop-corn!”

“I’ll have him locked in his cabin,” Muller decided. He picked up the nearest handset, saw that it was to the galley, and switched quickly. “Grundy, lock Bullard up. And no rough stuff this time.” Then he turned to Napier. “Dr. Napier, you’ll have to see him and find out what you can.”

I guess there’s a primitive fear of insanity in most of us. We felt sick, beyond the nagging worry about the food. Napier got up at once. “I’ll give him a sedative. Maybe it’s just nerves, and he’ll snap out of it after a good sleep. Anyhow, your mate can stand watching.”

“Who can cook?” Muller asked. His eyes swung down the table toward Jenny.

I wondered how she’d get out of that. Apparently she’d never told Muller about the scars she still had from spilled grease, and how she’d never forgiven her mother or been able to go near a kitchen since. But I should have guessed. She could remember my stories, too. Her eyes swung up toward mine pleadingly.

Eve Nolan stood up suddenly. "I'm not only a good cook, but I enjoy it," she stated flatly, and there was disgust in the look she threw at Jenny. She swung toward me. "How about it, Paul, can you wrestle the big pots around for me?"

"I used to be a short order cook when I was finishing school," I told her. But she'd ruined the line. The grateful look and laugh from Jenny weren't needed now. And curiously, I felt grateful to Eve for it. I got up and went after Napier.

I found him in Bullard's little cubbyhole of a cabin. He must have chased Grundy off, and now he was just drawing a hypo out of the cook's arm. "It'll take the pain away," he was saying softly. "And I'll see that he doesn't hit you again. You'll be all right, now. And in the morning, I'll come and listen to you. Just go to sleep. Maybe she'll come back and tell you more."

He must have heard me, since he signalled me out with his hand, and backed out quietly himself, still talking. He shut the door, and clicked the lock.

Bullard heard it, though. He jerked to a sitting position, and screamed. "No! No! He'll kill me! I'm a good man...."

He hunched up on the bed, forcing the sheet into his mouth. When he looked up a second later, his face was frozen in fear, but it was a desperate, calm kind of fear. He turned to face us, and his voice raised to a full shout, with every word as clear as he could make it.

"All right. Now I'll never tell you the secret. Now you can all die without air. I promise I'll never tell you what I know!"

He fell back, beating at the sheet with his hand and sobbing hysterically. Napier watched him. "Poor devil," the doctor said at last. "Well, in another minute the shot will take effect. Maybe he's lucky. He won't be worrying for awhile. And maybe he'll be rational tomorrow."

"All the same, I'm going to stand guard until Muller gets someone else here," I decided. I kept remembering Lomax.

Napier nodded, and half an hour later Bill Sanderson

came to take over the watch. Bullard was sleeping soundly.

The next day, though, he woke up to start moaning and writhing again. But he was keeping his word. He refused to answer any questions. Napier looked worried as he reported he'd given the cook another shot of sedative. There was nothing else he could do.

Cooking was a relief, in a way. By the time Eve and I had scrubbed all the pots into what she considered proper order, located some of the food lockers, and prepared and served a couple of meals, we'd evolved a smooth system that settled into a routine with just enough work to help keep our minds off the dwindling air in the tanks. In anything like a kitchen, she lost most of her mannish pose and turned into a live, efficient woman. And she could cook.

"First thing I learned," she told me. "I grew up in a kitchen. I guess I'd never have turned to photography if my kid brother hadn't been using our sink for his darkroom."

Wilcox brought her a bottle of his wine to celebrate her first dinner. He seemed to want to stick around, but she chased him off after the first drink. We saved half the bottle to make a sauce the next day.

It never got made. Muller called a council of war, and his face was pinched and old. He was leaning on Jenny as Eve and I came into the mess hall; oddly, she seemed to be trying to buck him up. He got down to the facts as soon as all of us were together.

"Our oxygen tanks are empty," he announced. "They shouldn't be—but they are. Someone must have sabotaged them before the plants were poisoned—and done it so the dials don't show it. I just found it out when the automatic switch to a new tank failed to work. We now have the air in the ship, and no more. Dr. Napier and I have figured that this will keep us all alive with the help of the plants for no more than fifteen days. I am open to any suggestions!"

There was silence after that, while it soaked in. Then it was broken by a thin scream from Phil Riggs. He slumped into

a seat and buried his head in his hands. Pietro put a hand on the man's thin shoulders, "Captain Muller—"

"Kill 'em!" It was Grundy's voice, bellowing sharply. "Let'em breathe space! They got us into it! We can make out with the plants left! It's our ship!"

Muller had walked forward. Now his fist lashed out, and Grundy crumpled. He lay still for a second, then got to his feet unsteadily. Jenny screamed, but Muller moved steadily back to his former place without looking at the mate. Grundy hesitated, fumbled in his pocket for something, and swallowed it.

"Captain, sir!" His voice was lower this time.

"Yes, Mr. Grundy?"

"How many of us can live off the plants?"

"Ten—perhaps eleven."

"Then—then give us a lottery!"

Pietro managed to break in over the yells of the rest of the crew. "I was about to suggest calling for volunteers, Captain Muller. I still have enough faith in humanity to believe...."

"You're a fool, Dr. Pietro," Muller said flatly. "Do you think Grundy would volunteer? Or Bullard? But thanks for clearing the air, and admitting your group has nothing more to offer. A lottery seems to be the only fair system."

He sat down heavily. "We have tradition on this; in an emergency such as this, death lotteries have been held, and have been considered legal afterwards. Are there any protests?"

I could feel my tongue thicken in my mouth. I could see the others stare about, hoping someone would object, wondering if this could be happening. But nobody answered, and Muller nodded reluctantly. "A working force must be left. Some men are indispensable. We must have an engineer, a navigator, and a doctor. One man skilled with engine-room practice and one with deck work must remain."

"And the cook goes," Grundy yelled. His eyes were intent and slitted again.

Some of both groups nodded, but Muller brought his

fist down on the table. "This will be a legal lottery, Mr. Grundy. Dr. Napier will draw for him."

"And for myself," Napier said. "It's obvious that ten men aren't going on to Saturn—you'll have to turn back, or head for Jupiter. Jupiter, in fact, is the only sensible answer. And a ship can get along without a doctor that long when it has to. I demand my right to the draw."

Muller only shrugged and laid down the rules. They were simple enough. He would cut drinking straws to various lengths, and each would draw one. The two deck hands would compare theirs, and the longer would be automatically safe. The same for the pair from the engine-room. Wilcox was safe. "Mr. Peters and I will also have one of us eliminated," he added quietly. "In an emergency, our abilities are sufficiently alike."

The remaining group would have their straws measured, and the seven shortest ones would be chosen to remove themselves into a vacant section between hulls without air within three hours, or be forcibly placed there. The remaining ten would head for Jupiter if no miracle removed the danger in those three hours.

Peters got the straws, and Muller cut them and shuffled them. There was a sick silence that let us hear the sounds of the scissors with each snip. Muller arranged them so the visible ends were even. "Ladies first," he said. There was no expression on his face or in his voice.

Jenny didn't giggle, but neither did she balk. She picked a straw, and then shrieked faintly. It was obviously a long one. Eve reached for hers—

And Wilcox yelled suddenly. "Captain Muller, protest!



Protest! You're using all long straws for the women!" He had jumped forward, and now struck down Muller's hand, proving his point.

"You're quite right, Mr. Wilcox," Muller said woodenly. He dropped his hand toward his lap and came up with a group of the straws that had been cut, placed there somehow without our seeing it. He'd done a smooth job of it, but not smooth enough. "I felt some of you would notice it, but I also felt that gentlemen would prefer to see ladies given the usual courtesies."

He reshuffled the assorted straws, and then paused. "Mr. Tremaine, there was a luxury liner named the *Lauri Ellu* with an assistant engineer by your name; and I believe you've shown a surprising familiarity with certain customs of space. A few days ago, Jenny mentioned something that jogged my memory. Can you still perform the duties of an engineer?"

Wilcox had started to protest at the delay. Now shock ran through him. He stared unbelievably from Muller to me and back, while his face blanched. I could guess what it must have felt like to see certain safety cut to a 50 per cent chance, and I didn't like the way Muller was willing to forget until he wanted to take a crack at Wilcox for punishment. But....

"I can," I answered. And then, because I was sick inside myself for cutting under Wilcox, I managed to add, "But I—I waive my chance at immunity!"

"Not accepted," Muller decided. "Jenny, will you draw?"

It was pretty horrible. It was worse when the pairs compared straws. The animal feelings were out in the open then. Finally, Muller, Wilcox, and two crewmen dropped out. The rest of us went up to measure our straws.

It took no more than a minute. I stood staring down at the ruler, trying to stretch the tiny thing I'd drawn. I could smell the sweat rising from my body. But I knew the answer. I had three hours left!

"Riggs, Oliver, Nolan, Harris, Tremaine, Napier and Grundy," Muller announced.

A yell came from Grundy. He stood up, with the engine man named Oliver, and there was a gun in his hand. "No damned big brain's kicking me off my ship," he yelled. "You guys know me. Hey, roooob!"

Oliver was with him, and the other three of the crew sprang into the group. I saw Muller duck a shot from Grundy's gun, and leap out of the room. Then I was in it, heading for Grundy. Beside me, Peters was trying to get a chair broken into pieces. I felt something hit my shoulder, and the shock knocked me downward, just as a shot whistled over my head.

Gravity cut off!

Someone bounced off me. I got a piece of the chair that floated by, found the end cracked and sharp, and tried to spin towards Grundy, but I couldn't see him. I heard Eve's voice yell over the other shouts. I spotted the plate coming for me, but I was still in midair. It came on steadily, edge on, and I felt it break against my forehead. Then I blacked out.

V

I had the granddaddy of all headaches when I came to. Doc Napier's face was over me, and Jenny and Muller were working on Bill Sanderson. There was a surprisingly small and painful lump on my head. Pietro and Napier helped me up, and I found I could stand after a minute.

There were four bodies covered with sheets on the floor. "Grundy, Phil Riggs, Peters and a deckhand named Storm," Napier said. "Muller gave us a whiff of gas and not quite in time."

"Is the time up?" I asked. It was the only thing I could think of.

Pietro shook his head sickly. "Lottery is off. Muller says we'll have to hold another, since Storm and Peters were supposed to be safe. But not until tomorrow."

Eve came in then, lugging coffee. Her eyes found me, and she managed a brief smile. "I gave the others coffee," she reported to Muller. "They're pretty subdued now."

“Mutiny!” Muller helped Jenny’s brother to his feet and began helping him toward the door. “Mutiny! And I have to swallow that!”

Pietro watched him go, and handed Eve back his cup. “And there’s no way of knowing who was on which side. Dr. Napier, could you do something....”

He held out his hands that were shaking, and Napier nodded. “I can use a sedative myself. Come on back with me.”

Eve and I wandered back to the kitchen. I was just getting my senses back. The damned stupidity of it all. And now it would have to be done over. Three of us still had to have our lives snuffed out so the others could live—and we all had to go through hell again to find out which.

Eve must have been thinking the same. She sank down on a little stool, and her hand came out to find mine. “For what? Paul, whoever poisoned the plants knew it would go this far! He had to! What’s to be gained? Particularly when he’d have to go through all this, too! He must have been crazy!”

“Bullard couldn’t have done it,” I said slowly.

“Why should it be Bullard? How do we know he was insane? Maybe when he was shouting that he wouldn’t tell, he was trying to make a bribe to save his own life. Maybe he’s as scared as we are. Maybe he was making sense all along, if we’d only listened to him. He—”

She stood up and started back toward the lockers, but I caught her hand. “Eve, he wouldn’t have done it—the killer—if he’d had to go through the lottery! He knew he was safe! That’s the one thing we’ve been overlooking. The man to suspect is the only man who could be sure he would get back! My God, we saw him juggle those straws to save Jenny! He knew he’d control the lottery.”

She frowned. “But ... Paul, he practically suggested the lottery! Grundy brought it up, but he was all ready for it.” The frown vanished, then returned. “But I still can’t believe it.”

“He’s the one who wanted to go back all the time. He kept insisting on it, but he had to get back without violating

his contract.” I grabbed her hand and started toward the nose of the ship, justifying it to her as I went. “The only man with a known motive for returning, the only one completely safe—and we didn’t even think of it!”

She was still frowning, but I wasn’t wasting time. We came up the corridor to the control room. Ahead the door was slightly open, and I could hear a mutter of Jenny’s voice. Then there was the tired rumble of Muller.

“I’ll find a way, baby. I don’t care how close they watch, we’ll make it work. Pick the straw with the crimp in the end—I can do that, even if I can’t push one out further again. I tell you, nothing’s going to happen to you.”

“But Bill—” she began.

I hit the door, slamming it open. Muller sat on a narrow couch with Jenny on his lap. I took off for him, not wasting a good chance when he was handicapped. But I hadn’t counted on Jenny. She was up, and her head banged into my stomach before I knew she was coming. I felt the wind knocked out, but I got her out of my way—to look up into the muzzle of a gun in Muller’s hands.

“You’ll explain this, Mr. Tremaine,” he said coldly. “In ten seconds, I’ll have an explanation or a corpse.”

“Go ahead,” I told him. “Shoot, damn you! You’ll get away with this, too, I suppose. Mutiny, or something. And down in that rotten soul of yours, I suppose you’ll be gloating at how you made fools of us. The only man on board who was safe even from a lottery, and we couldn’t see it. Jenny, I hope you’ll be happy with this butcher. Very happy!”

He never blinked. “Say that about the only safe man aboard again,” he suggested.

I repeated it, with details. But he didn’t like my account. He turned to Eve, and motioned for her to take it up. She was frowning harder, and her voice was uncertain, but she summed up our reasons quickly enough.

And suddenly Muller was on his feet. “Mr. Tremaine, for a damned idiot, you have a good brain. You found the key

to the problem, even if you couldn't find the lock. Do you know what happens to a captain who permits a death lottery, even what I called a legal one? He doesn't captain a liner—he shoots himself after he delivers his ship, if he's wise! Come on, we'll find the one indispensable man. You stay here, Jenny—you too, Eve!"

Jenny whimpered, but stayed. Eve followed, and he made no comment. And then it hit me. The man who had *thought* he was indispensable, and hence safe—the man I'd naturally known in the back of my head could be replaced, though no one else had known it until a little while ago.

"He must have been sick when you ran me in as a ringer," I said, as we walked down toward the engine hatch. "But why?"

"I've just had a wild guess as to part of it," Muller said.

Wilcox was listening to the Buxtehude when we shoved the door of his room open, and he had his head back and eyes closed. He snapped to attention, and reached out with one hand toward a drawer beside him. Then he dropped his arm and stood up, to cut off the tape player.

"Mr. Wilcox," Muller said quietly, holding the gun firmly on the engineer. "Mr. Wilcox, I've detected evidence of some of the Venus drugs on your two assistants for some time. It's rather hard to miss the signs in their eyes. I've also known that Mr. Grundy was an addict. I assumed that they were getting it from him naturally. And as long as they performed their duties, I couldn't be choosy on an old ship like this. But for an officer to furnish such drugs—and to smuggle them from Venus for sale to other planets—is something I cannot tolerate. It will make things much simpler if you will surrender those drugs to me. I presume you keep them in those bottles of wine you bring aboard?"

Wilcox shook his head slowly, settling back against the tape machine. Then he shrugged and bowed faintly. "The chi-anti, sir!"

I turned my head toward the bottles, and Eve started

forward. Then I yelled as Wilcox shoved his hand down toward the tape machine. The gun came out on a spring as he touched it.

Muller shot once, and the gun missed Wilcox's fingers as the engineer's hand went to his hip, where blood was flowing. He collapsed into the chair behind him, staring at the spot stupidly. "I cut my teeth on *tough* ships, Mr. Wilcox," Muller said savagely.

The man's face was white, but he nodded slowly, and a weak grin came onto his lips. "Maybe you didn't exaggerate those stories at that," he conceded slowly. "I take it I drew a short straw."

"Very short. It wasn't worth it. No profit from the piddling sale of drugs is worth it."

"There's a group of strings inside the number one fuel locker," Wilcox said between his teeth. The numbness was wearing off, and the shattered bones in his hip were beginning to eat at him. "Paul, pull up one of the packages and bring it here, will you?"

I found it without much trouble—along with a whole row of others, fine cords cemented to the side of the locker. The package I drew up weighed about ten pounds. Wilcox opened it and scooped out a thimbleful of greenish powder. He washed it down with wine.

"Fatal?" Muller asked.

The man nodded. "In that dosage, after a couple of hours. But it cuts out the pain—ah, better already. I won't feel it. Captain, I was never piddling. Your ship has been the sole source of this drug to Mars since a year or so after I first shipped on her. There are about seven hundred pounds of pure stuff out there. Grundy and the others would commit public murder daily rather than lose the few ounces a year I gave them. Imagine what would happen when Pietro conscripted the *Wahoo* and no drugs arrived. The addicts find out no more is coming—they look for the peddlers—and *they* start looking for their suppliers...."

He shrugged. "There might have been time and ways, if I could have gotten the ship back to Earth or Jupiter. It might have been recommissioned into the Earth-Mars-Venus run, even. Pietro's injunction caught me before I could transship, but with another chance, I might have gotten the stuff to Mars in time.... Well, it was a chance I took. Satisfied?"

Eve stared at him with horrified eyes. Maybe I was looking the same. It was plain enough now. He'd planned to poison the plants and drive us back. Murder of Hendrix had been a blunder when he'd thought it wasn't working properly. "What about Sam?" I asked.

"Blackmail. He was too smart. He'd been sure Grundy was smuggling the stuff, and raking off from him. He didn't care who killed Hendrix as much as how much Grundy would pay to keep his mouth shut—with murder around, he figured Grundy'd get rattled. The fool did, and Sam smelled bigger stakes. Grundy was bait to get him down near here. I killed him."

"And Lomax?"

"I don't know. Maybe he was bluffing. But he kept going from room to room with a pocketful of chemicals, making some kind of tests. I couldn't take a chance on his being able to spot chromazone. So I had Grundy give him my keys and tell him to go ahead—then jump him."

And after that, when he wasn't quite killed, they'd been forced to finish the job. Wilcox shrugged again. "I guess it got out of hand. I'll make a tape of the whole story for you, Captain. But I'd appreciate it if you'd get Napier down here. This is getting pretty messy."

"He's on the way," Eve said. We hadn't seen her call, but the doctor arrived almost immediately afterwards.

He sniffed the drug, and questioned us about the dose Wilcox had taken. Then he nodded slowly. "About two hours, I'd say. No chance at all to save him. The stuff is absorbed almost at once and begins changing to something else in the blood. I'll be responsible, if you want."

Muller shrugged. "I suppose so. I'd rather deliver him in irons to a jury, but.... Well, we still have a lottery to hold!"

It jerked us back to reality sharply. Somehow, I'd been fighting off the facts, figuring that finding the cause would end the results. But even with Wilcox out of the picture, there were twelve of us left—and air for only ten!

Wilcox laughed abruptly. "A favor for a favor. I can give you a better answer than a lottery."

"Pop-corn! Bullard!" Eve slapped her head with her palm. "Captain, give me the master key." She snatched it out of his hand and was gone at a run.

Wilcox looked disappointed, and then grinned. "Pop-corn and beans. I overlooked them myself. We're a bunch of city hicks. But when Bullard forgot his fears in his sleep, he remembered the answer—and got it so messed up with his dream and his new place as a hero that my complaint tipped the balance. Grundy put the fear of his God into him then. And you didn't get it. Captain, you don't dehydrate beans and pop-corn—they come that way naturally. You don't can them, either, if you're saving weight. They're seeds—put them in tanks and they grow!"

He leaned back, trying to laugh at us, as Napier finished dressing his wound. "Bullard knows where the lockers are. And corn grows pretty fast. It'll carry you through. Do I get that favor? It's simple enough—just to have Beethoven's Ninth on the machine and for the whole damned lot of you to get out of my cabin and let me die in my own way!"

Muller shrugged, but Napier found the tape and put it on. I wanted to see the louse punished for every second of worry, for Lomax, for Hendrix—even for Grundy. But there wasn't much use in vengeance at this point.

"You're to get all this, Paul," Wilcox said as we got ready to leave. "Captain Muller, everything here goes to Tremaine. I'll make a tape on that, too. But I want it to go to a man who can appreciate Hohmann's conducting."

Muller closed the door. "I guess it's yours," he admitted.

“Now that you’re head engineer here, Mr. Tremaine, the cabin is automatically yours. Take over. And get that junk in the fuel locker cleaned out—except enough to keep your helpers going. They’ll need it, and we’ll need their work.”

“I’ll clean out his stuff at the same time,” I said. “I don’t want any part of it.”

He smiled then, just as Eve came down with Bullard and Pietro. The fat cook was sobered, but already beginning to fill with his own importance. I caught snatches as they began to discuss Bullard’s knowledge of growing things. It was enough to know that we’d all live, though it might be tough for a while.

Then Muller gestured upwards. “You’ve got a reduced staff, Dr. Pietro. Do you intend going on to Saturn?”

“We’ll go on,” Pietro decided. And Muller nodded. They turned and headed upwards.

I stood staring at my engines. One of them was a touch out of phase and I went over and corrected it. They’d be mine for over two years—and after that, I’d be back on the lists.

Eve came over beside me, and studied them with me. Finally she sighed softly. “I guess I can see why you feel that way about them, Paul,” she said. “And I’ll be coming down to look at them. But right now, Bullard’s too busy to cook, and everyone’s going to be hungry when they find we’re saved.”

I chuckled, and felt the relief wash over me finally. I dropped my hand from the control and caught hers—a nice, friendly hand.

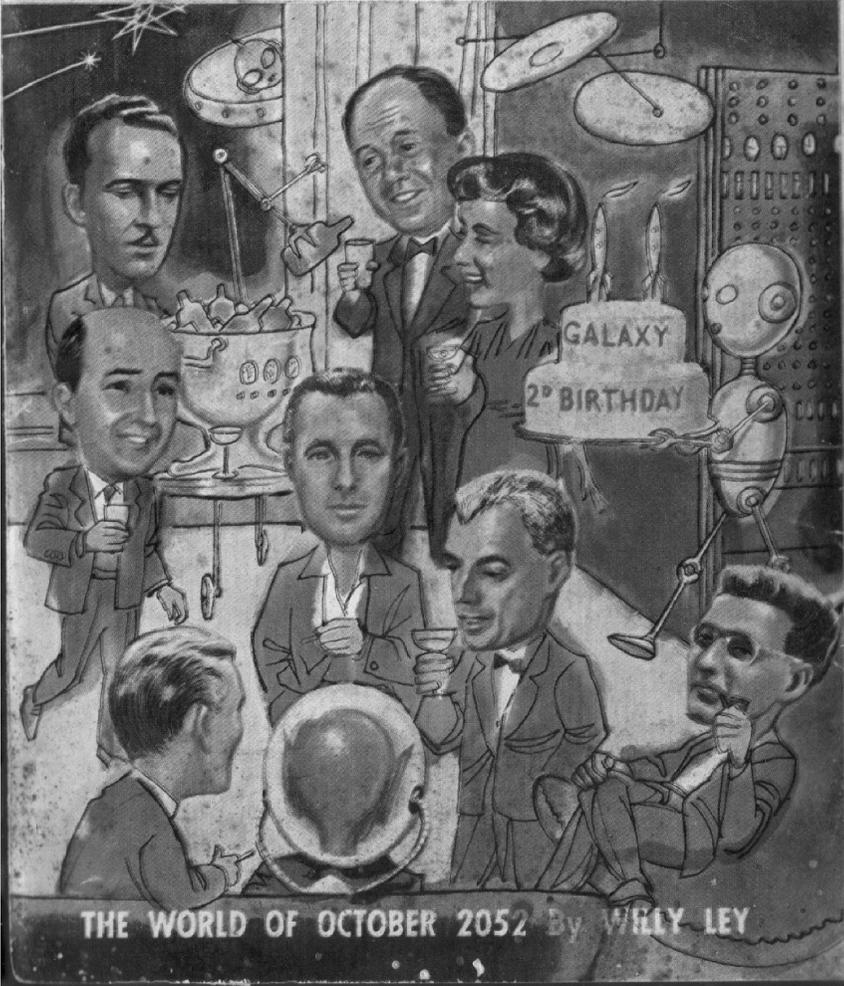
But at the entrance I stopped and looked back toward the cabin where Wilcox lay. I could just make out the second movement of the Ninth beginning.

I never could stand the cheap blatancy of Hohmann’s conducting.

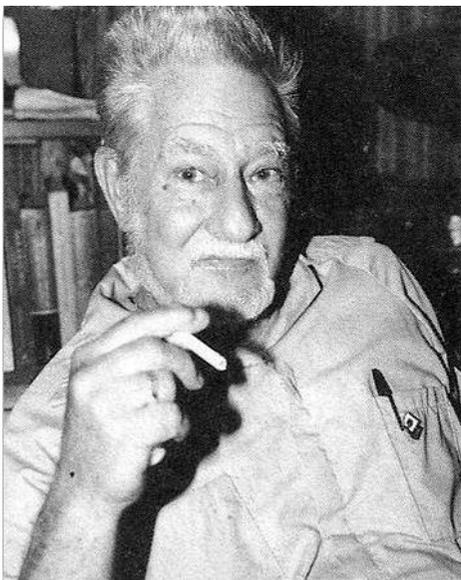
Galaxy

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THE WORLD OF OCTOBER 2052 By WILLY LEY



If you're a fan of the original *Star Trek* series, you are a fan of Jerome Bixby. He wrote the screenplays for some of the *Star Trek* original series' best episodes: *Mirror, Mirror*, *Day of the Dove*, *Requiem for Methuselah*, and *By Any Other Name*.

Star Trek was Gene Roddenberry's "Wagon Train in the stars", and Bixby wrote Westerns as well as science fiction.

He was born on January 11, 1923 in Los Angeles. He edited *Planet Stories* from Summer 1950 to July 1951, and *Two Complete Science Adventure Novels* from Winter 1950 to July 1951. He co-wrote the screenplay for the 1966 movie *Fantastic Voyage*, which Isaac Asimov later turned into a novel.

He died at age 75 on April 28, 1998 in San Bernadino, California.

The following story is presented as it was printed in *Galaxy Science Fiction* in 1952.

ZEN

By JEROME DIXBY

*Because they were so likable
and intelligent and adaptable
—they were vastly dangerous!*



Illustrated by ASHMAN

IT'S difficult, when you're on one of the asteroids, to keep from tripping, because it's almost impossible to keep your eyes on the ground. They never got around to putting portholes in spaceships, you know—unnecessary when you're flying by GB, and psychologically inadvisable,

besides—so an asteroid is about the only place, apart from Luna, where you can really see the stars.

There are so many stars in an asteroid sky that they look like clouds; like massive, heaped-up silver clouds floating slowly around the inner surface of the vast ebony sphere that surrounds

ZEN

you and your tiny foothold. They are near enough to touch, and you want to touch them, but they are so frighteningly far away . . . and so beautiful: there's nothing in creation half so beautiful as an asteroid sky.

You don't want to look down, naturally.

I HAD left the *Lucky Pierre* to search for fossils (I'm David Koontz, the *Lucky Pierre's* paleontologist). Somewhere off in the darkness on either side of me were Joe Hargraves, gadgeting for mineral deposits, and Ed Reiss, hopefully on the lookout for anything alive. The *Lucky Pierre* was back of us, her body out of sight behind a low black ridge, only her gleaming nose poking above like a porpoise coming up for air. When I looked back, I could see, along the jagged rim of the ridge, the busy reflected flickerings of the bubble-camp the techs were throwing together. Otherwise all was black, except for our blue-white torch beams that darted here and there over the gritty, rocky surface.

The twenty-nine of us were E. T. I. Team 17, whose assignment was the asteroids. We were four years and three months out of Terra, and we'd reached Vesta right on schedule. Ten minutes after landing, we had known that the clod was part of the crust of

Planet X—or Sorn, to give it its right name—one of the few such parts that hadn't been blown clean out of the Solar System.

That made Vesta extra-special. It meant settling down for a while. It meant a careful, months-long scrutiny of Vesta's every square inch and a lot of her cubic ones, especially by the life-scientists. Fossils, artifacts, animate life . . . a surface chunk of Sorn might harbor any of these, or all. Some we'd tackled already had a few.

In a day or so, of course, we'd have the one-man beetles and crewboats out, and the floodlights orbiting overhead, and Vesta would be as exposed to us as a molecule on a microscreen. Then work would start in earnest. But in the meantime—and as usual—Hargraves, Reiss and I were out prowling, our weighted boots clomping along in darkness. Captain Feldman had long ago given up trying to keep his science-minded charges from galloping off alone like this. In spite of being a military man, Feld's a nice guy; he just shrugs and says, "Scientists!" when we appear brightly at the airlock, waiting to be let out.

SO the three of us went our separate ways, and soon were out of sight of one another. Ed Reiss, the biologist, was looking

GALAXY SCIENCE FICTION

hardest for animate life, naturally.

But I found it.

I HAD crossed a long, rounded expanse of rock—lava, wonderfully colored—and was descending into a boulder-cluttered pocket. I was nearing the “bottom” of the chunk, the part that had been the deepest beneath Sorn’s surface before the blow-up. It was the likeliest place to look for fossils.

But instead of looking for fossils, my eyes kept rising to those incredible stars. You get that way particularly after several weeks of living in steel; and it was lucky that I got that way this time, or I might have missed the Zen.

My feet tangled with a rock. I started a slow, light-gravity fall, and looked down to catch my balance. My torch beam flickered across a small, red-furred teddy-bear shape. The light passed on. I brought it sharply back to target.

My hair did *not* stand on end, regardless of what you’ve heard me quoted as saying. Why should it have, when I already knew Yurt so well—considered him, in fact, one of my closest friends?

The Zen was standing by a rock, one paw resting on it, ears cocked forward, its stubby hind legs braced ready to launch it

into flight. Big yellow eyes blinked unemotionally at the glare of the torch, and I cut down its brilliance with a twist of the polarizer lens.

The creature stared at me, looking ready to jump halfway to Mars or straight at me if I made a wrong move.

I addressed it in its own language, clucking my tongue and whistling through my teeth: “Suh, Zen—”

In the blue-white light of the torch, the Zen shivered. It didn’t say anything. I thought I knew why. Three thousand years of darkness and silence . . .

I said, “I won’t hurt you,” again speaking in its own language.

The Zen moved away from the rock, but not away from me. It came a little closer, actually, and peered up at my helmeted, mirror-glassed head—unmistakably the seat of intelligence, it appears, of any race anywhere. Its mouth, almost human-shaped, worked; finally words came. It hadn’t spoken, except to itself, for three thousand years.

“You . . . are not Zen,” it said. “Why—how do you speak Zen-nacai?”

It took me a couple of seconds to untangle the squeaking syllables and get any sense out of them. What I had already said to it were stock phrases that Yurt

Z E N

had taught me; I knew still more, but I couldn't speak Zennacai fluently by any means. Keep this in mind, by the way: I barely knew the language, and the Zen could barely remember it. To save space, the following dialogue is reproduced without bumbblings, blank stares and *What-did-you-says?* In reality, our talk lasted over an hour.

"I am an Earthman," I said. Through my earphones, when I spoke, I could faintly hear my own voice as the Zen must have heard it in Vesta's all but non-existent atmosphere; tiny, metallic, cricketlike.

"Eert . . . mn?"

I pointed at the sky, the incredible sky. "From out there. From another world."

It thought about that for a while. I waited. We already knew that the Zens had been better astronomers at their peak than we were right now, even though they'd never mastered space travel; so I didn't expect this one to boggle at the notion of creatures from another world. It didn't. Finally it nodded, and I thought, as I had often before, how curious it was that this gesture should be common to Earthmen and Zen.

"So. Eert-mn." it said. "And you know what I am?"

When I understood, I nodded, too. Then I said, "Yes," realizing

that the nod wasn't visible through the one-way glass of my helmet.

"I am—last of Zen," it said.

I said nothing. I was studying it closely, looking for the features which Yurt had described to us: the lighter red fur of arms and neck, the peculiar formation of flesh and horn on the lower abdomen. They were there. From the coloring, I knew this Zen was a female.

The mouth worked again—not with emotion, I knew, but with the unfamiliar act of speaking. "I have been here for—for—" she hesitated—"I don't know For five hundred of my years."

"For about three thousand of mine," I told her.

AND then blank astonishment sank home in me—astonishment at the last two words of her remark. I was already familiar with the Zens' enormous intelligence, knowing Yurt as I did . . . but imagine thinking to qualify years with *my* when just out of nowhere a visitor from another planetary orbit pops up! And there had been no special stress given the distinction, just clear, precise thinking, like Yurt's.

I added, still a little awed: "We know how long ago your world died."

"I was child then," she said. "I don't know—what happened.

GALAXY SCIENCE FICTION

I have wondered." She looked up at my steel-and-glass face; I must have seemed like a giant. Well, I suppose I was. "This—what we are on—was part of Sorn, I know. Was it—" She fumbled for a word—"was it atom explosion?"

I told her how Sorn had gotten careless with its hydrogen atoms and had blown itself over half of creation. (This the E. T. I. Teams had surmised from scientific records found on Eros, as well as from geophysical evidence scattered throughout the other bodies.)

"I was child," she said again after a moment. "But I remember—I remember things *different* from this. Air . . . heat . . . light . . . how do I live here?"

Again I felt amazement at its intelligence; (and it suddenly occurred to me that astronomy and nuclear physics must have been taught in Sorn's "elementary schools"—else that *my years* and *atom explosion* would have been all but impossible). And now this old, old creature, remembering back three thousand years to childhood — probably to those "elementary schools" — remembering, and defining the differences in environment between *then* and *now*; and more, wondering at its existence in the different *now*—

And then I got my own think-

ing straightened out. I recalled some of the things we had learned about the Zen.

Their average lifespan had been 12,000 years or a little over. So the Zen before me was, by our standards, about twenty-five years old. Nothing at all strange about remembering, when you are twenty-five, the things that happened to you when you were seven . . .

But the Zen's question, even my rationalization of my reaction to it, had given me a chill. Here was no cuddly teddy bear.

This creature had been born before Christ!

She had been alone for three thousand years, on a chip of bone from her dead world beneath a sepulchre of stars. The last and greatest Martian civilization, the *L'hrai*, had risen and fallen in her lifetime. And she was twenty-five years old.

"How do I live here?" she asked again.

I got back into my own framework of temporal reference, so to speak, and began explaining to a Zen what a Zen was. (I found out later from Yurt that biology, for the reasons which follow, was one of the most difficult studies; so difficult that nuclear physics actually *preceded* it!) I told her that the Zen had been, all evidence indicated, the toughest, hardest, longest-lived

ZEN

creatures God had ever cooked up: practically independent of their environment, no special ecological niche; just raw, stubborn, tenacious life, developed to a fantastic extreme—a greater force of life than any other known, one that could exist almost anywhere under practically any conditions—even floating in midspace, which, asteroid or no, this Zen was doing right now.

The Zens breathed, all right, but it was nothing they'd had to do in order to live. It gave them nothing their incredible metabolism couldn't scrounge up out of rock or cosmic rays or interstellar gas or simply do without for a few thousand years. If the human body is a furnace, then the Zen body is a feeder pile. Maybe that, I thought, was what evolution always worked toward.

"Please, will you kill me?" the Zen said.

I'D been expecting that. Two years ago, on the bleak surface of Eros, Yurt had asked Engstrom to do the same thing. But I asked, "Why?" although I knew what the answer would be, too.

The Zen looked up at me. She was exhibiting every ounce of emotion a Zen is capable of, which is a lot; and I could recognize it, but not in any familiar terms. A tiny motion here, a quiver

there, but very quiet and still for the most part. And *that* was the violent expression: restraint. Yurt, after two years of living with us, still couldn't understand why we found this confusing.

Difficult, aliens—or being alien.

"I've tried so often to do it myself," the Zen said softly. "But I can't. I can't even hurt myself. Why do I want you to kill me?" She was even quieter. Maybe she was crying. "I'm alone. Five hundred years, Eert-mn—not too long. I'm still young. But what good is it—life—when there are no other Zen?"

"How do you know there are no other Zen?"

"There are no others," she said almost inaudibly. I suppose a human girl might have shrieked it.

A child, I thought, when your world blew up. And you survived. Now you're a young three-thousand-year-old woman . . . uneducated, afraid, probably crawling with neuroses. Even so, in your thousand-year terms, young lady, you're not too old to change.

"Will you kill me?" she asked again.

And suddenly I was having one of those eye-popping third-row-center views of the whole scene: the enormous, beautiful sky; the dead clod, Vesta; the little creature who stood there staring at me—the brilliant-ignorant, human-like-alien, old-young creature who

GALAXY SCIENCE FICTION

was asking me to kill her.

For a moment the human quality of her thinking terrified me . . . the feeling you might have waking up some night and finding your pet puppy sitting on your chest, looking at you with wise eyes and white fangs gleaming . . .

Then I thought of Yurt—smart, friendly Yurt, who had learned to laugh and wisecrack—and I came out of the jeebies. I realized that here was only a sick girl, no tiny monster. And if she were as resilient as Yurt . . . well, it was his problem. He'd probably pull her through.

But I didn't pick her up. I made no attempt to take her back to the ship. Her tiny white teeth and tiny yellow claws were harder than steel; and she was, I knew, unbelievably strong for her size. If she got suspicious or decided to throw a phobic tizzy, she could scatter shreds of me over a square acre of Vesta in less time than it would take me to yelp.

"Will you—" she began again.

I tried shakily, "Hell, no. Wait here." Then I had to translate it.

I WENT back to the *Lucky Pierre* and got Yurt. We could do without him, even though he had been a big help. We'd taught him a lot—he'd been a child at the blow-up, too—and he'd

taught us a lot. But this was more important, of course.

When I told him what had happened, he was very quiet; crying, perhaps, just like a human being, with happiness.

Cap Feldman asked me what was up, and I told him, and he said, "Well, I'll be blessed!"

I said, "Yurt, are you sure you want us to keep hands off . . . just go off and leave you?"

"Yes, please."

Feldman said, "Well, I'll be blessed."

Yurt, who spoke excellent English, said, "Bless you all."

I took him back to where the female waited. From the ridge, I knew, the entire crew was watching through binocs. I set him down, and he fell to studying her intently.

"I am not a Zen," I told her, giving my torch full brilliance for the crew's sake, "but Yurt here is. Do you see . . . I mean, do you know what you look like?"

She said, "I can see enough of my own body to—and—yes . . ."

"Yurt," I said, "here's the female we thought we might find. Take over."

Yurt's eyes were fastened on the girl.

"What—do I do now?" she whispered worriedly.

"I'm afraid that's something only a Zen would know," I told

ZEN

her, smiling inside my helmet. "I'm not a Zen. Yurt is."

She turned to him. "You will tell me?"

"If it becomes necessary." He moved closer to her, not even looking back to talk to me. "Give us some time to get acquainted, will you, Dave? And you might leave some supplies and a bubble at the camp when you move on, just to make things pleasanter."

By this time he had reached the female. They were as still as space, not a sound, not a motion. I wanted to hang around, but I knew how I'd feel if a Zen, say, wouldn't go away if I were the last man alive and had just met the last woman.

I moved my torch off them and headed back for the *Lucky Pierre*. We all had a drink to the saving of a great race that might have become extinct. Ed Reiss, though, had to do some worrying before he could down his drink.

"What if they don't like each other?" he asked anxiously.

"They don't have much choice," Captain Feldman said, always the realist. "Why do homely women fight for jobs on the most isolated space outposts?"

Reiss grinned. "That's right. They look awful good after a year or two in space."

"Make that twenty-five by Zen standards or three thousand by ours," said Joe Hargraves, "and I'll bet they look beautiful to each other."

We decided to drop our investigation of Vesta for the time being, and come back to it after the honeymoon.

Six months later, when we returned, there were twelve hundred Zen on Vesta!

Captain Feldman was a realist but he was also a deeply moral man. He went to Yurt and said, "It's indecent! Couldn't the two of you control yourselves at least a little? *Twelve hundred kids!*"

"We were rather surprised ourselves," Yurt said complacently. "But this seems to be how Zen reproduce. Can you have only half a child?"

Naturally, Feld got the authorities to quarantine Vesta. Good God, the Zen could push us clear out of the Solar System in a couple of generations!

I don't think they would, but you can't take such chances, can you?

—JEROME BIXBY





This book of science fiction's past ends at its beginning. No book about the greats of twentieth century science fiction is complete without Hugo Gernsback, who the Smithsonian calls "the father of science fiction". More accurately, he is certainly the father of science fiction magazines.

He also coined the term "science fiction".

There was certainly science fiction before Mr. Gernsback published, but short stories appeared in general purpose magazines that ran just about anything. His magazine, *Amazing Stories*, was the first science fiction magazine.

He was born in Luxembourg City on August 16, 1884 to a winemaker named Moritz Gernsbacher and his wife Berta.

He moved to the United States in 1904, later becoming a U.S. Citizen. After his move to the U.S. he imported electronic parts and equipment, including some of his own design, and worked to popularize amateur radio. His catalogs, titled *Modern Electrics* and published from April 1908 are said by most historians to actually be magazines, since they contained stories, features, and articles.

The year after he opened his catalog/magazine he founded the Wireless Association of America; radio was known as "wireless" then. Radio was brand new, high tech. There was no such thing as electronics before 1904, because that was the year the vacuum tube, or "valve", was invented.

The utopian science fiction he often published in *Modern Electrics* became popular, and he started the first magazine devoted entirely to science fiction, *Amazing Stories*, in 1926.

Its first edition in April of that year contained an

editorial and six old stories that had been previously published. Not only was this issue the first edition of any science fiction magazine, it was the beginning of the genre's fandom as well. His letters to the editor column was a precursor to today's internet chat rooms, as the writer's address was printed with the letter, and fans started collaborating by mail. It's said that Asimov, Bradbury, and others got together by mail as teenagers because of the magazine's letters section and were probably encouraged to write stories.

But Gernsback was certainly no saint. He was called "Hugo the Rat" by H.P. Lovecraft and Clark Ashton Smith for his habit of underpaying his writers, and sometimes not paying them at all; writer Jack Williamson had to hire an American Fiction Guild lawyer to get paid. Writer Barry Malzberg said of him, "Gernsback's venality and corruption, his sleaziness and his utter disregard for the financial rights of authors, have been so well documented and discussed in critical and fan literature. That the founder of genre science fiction who gave his name to the field's most prestigious award and who was the Guest of Honor at the 1952 Worldcon was pretty much a crook (and a contemptuous crook who stiffed his writers but paid himself \$100K a year as President of Gernsback Publications) has been clearly established."

Hugo almost didn't make it into this book, because his writing is incredibly hard to find. He wrote science fiction, but I could find none, not even his novel *Ralph 124C 41+* that was printed as a twelve part serial in *Modern Electrics* and is said by wikipedia to be "one of the most influential science fiction stories of all time". I've seen much written about it, though, and have seen nothing positive. Lester del Rey, for instance, said it was "simply dreadful".

I rankled at paying eight dollars to get an electronic copy of a public domain work, but it was all I could find. I'm not sure, but I believe it is the editorial from that first *Amazing Stories*. Although the word "futurist" wouldn't be used as it is

today until the 1940s, this essay shows that Gernsback was, indeed, a futurist. It is, in its own words, a prophesy of what life would be like fifty years in its future, which would be the late 1970s.

Like all futurist predictions, some were entirely accurate – color television when television itself hadn't yet been made practical, and buildings with comfortable temperature all year around. Some did happen, but much later than he thought, like the picture phone that is in use now, with videoconferencing, Skype, and the like, but isn't yet widely used.

Some, like the matter transporter Roddenberry used, and the moving sidewalks that both Asimov and Heinlein used, are still science fiction.

Some, like his electric roller skates, are just silly – no different than today's futurists.

Just as striking as what he got wrong and what he got right are things that completely changed the world, like lasers, computers, or bioengineering, that there was no way for anyone to foresee.

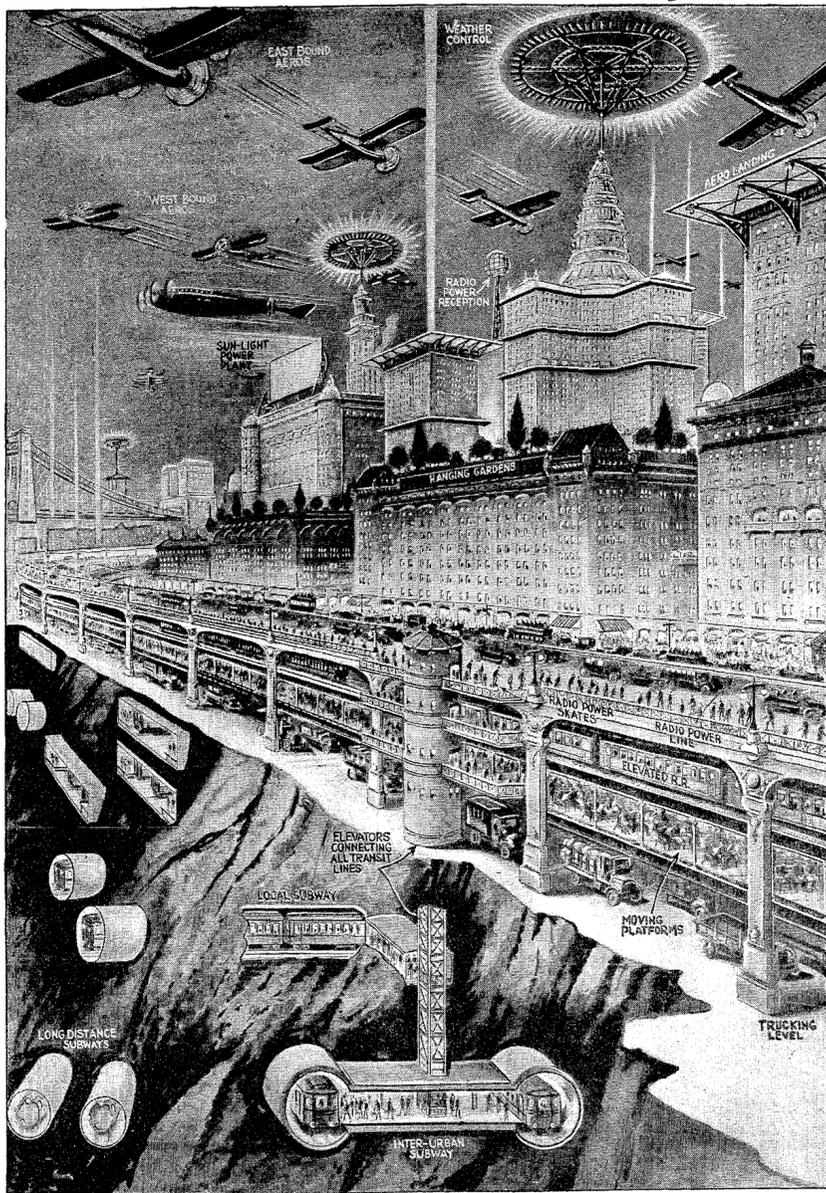
He died in 1967, three days after his eighty third birthday.

I was only furnished a scan of this article, but it was a very large paged periodical and printing the scan, which is presented on the book's last page, makes the printing microscopic. That one page article takes up eight pages in this book. It is the only unedited scan in this book.

So this book of the future told by the greats of the past ends with a look at Hugo Gernsback's vision of his future, and our past, from 1926.

Fifty Years From Now

A Glance Ahead at the Surprises Science Has in Store for Us and a Prophetic Picture of Our Great American Cities Half a Century Hence



Cities Will Grow Bigger and the Great Pressing Problem of Transportation of Persons and Things Will Be Solved by Moving Platforms, Avenues for Wireless Propelled Skaters, and Tunnels at Enormous Depths Below the Surface, While the Weather Control Station Will Provide Rain or Sunshine at Will.

From Drawing Copyright by "Practical Electric."

By Hugo Gernsback,

Editor of radio News, Science and Invention, and The Experimenter.

Member of American Physical Society.

Few people have patience with a prophet. Most people live only today; tomorrow is an unknown quantity. The remarkable thing about the scientific prophet is that, as a rule, his wildest flights of imagination have proved absolutely inadequate to the progress that actually occurred long before the time assigned in the prophecy was reached.

When Jules Verne wrote his prophetic books some fifty years ago, he was ridiculed not a little. He had "invented" the submarine, almost down to the last nut and bolt. He even had it propelled electrically, and there were few things he had overlooked. When his story first appeared, it was held that the device was impossible. Twenty years later his prophecy had been fulfilled.

When we look back fifty years, it is amazing to find the tremendous progress that has been wrought by electricity, the mysterious fluid.

Fifty years ago there was no telephone. There was no skyscraper, because we had no electric elevators. There was no electric light, there were no moving pictures, there were no electric trolley cars, no electric trains, no tunnels under rivers because we had no electric trains to keep us from suffocating. Wireless telegraphy fifty years ago would have been held as preposterous. The suggestion to send a picture from New York to London through the air without wire would have called forth a storm of ridicule.

How will this world look to us fifty years hence?

If the rate of population is maintained, as it has been in the past, all large cities will at least be three or four times as large as they are now. A city like Chicago, for instance, will probably have 10,000,000 inhabitants. New York City will probably have anywhere from 12,000,000 to 15,00,000, with other cities in proportion. How will this tremendous

population be taken care of, as, for instance, going to and from work?

In all our large cities transportation has become well nigh intolerable. It seems that it will be necessary to have streets arranged in such a way that the various traffics can be taken care of in a more adequate manner than is possible today. Every city will probably have a so-called belt line, similar to that shown in our illustration. The top level will be for light passenger vehicles, autos and the like.

There is no doubt that all of these will be propelled electrically by that time. In the accompanying illustration you see a wire line running along the top of the structure. This line will give its power by radio, not only to the automobile, buses, etc., but it will serve to propel pedestrians as well.



Everybody Will Be His Own Taxicab.
With a Simple Wireless Arrangement in
Your Hat or Using Cane or Parasol.
You Will Go to Business or Shop-
ping on Electric Skates at Any
Speed You Desire.

Each pedestrian will roll on electric skates, such as have been constructed even today. An insulated wire running from the skate to the head or shoulder of the skater will be sufficient to take the power from the radio power line, and we shall then all be propelled electrically at a pace at least four or five times as fast as we walk today.

Underneath the first level in the picture we have the elevated railway much as it is now, electrically propelled, of course. This railway, however, will make much greater speed than we

now know, due to the different manner of construction, as well as to better track, and other vital elements of construction. Below the elevated railway we have continuous moving platforms. There will be three such moving platforms alongside of each other. The first platform will move only a

few miles per hour, the second at eight or ten miles per hour, and the third at twelve or fifteen miles per hour.

You step upon the slowest moving one from terra firma and move to the faster ones and take your seat. Then arriving at your station, you can either take the lift to the top platform or else you can get off upon the "elevated level" and take the fast train there, which stops only every thirty or forty blocks. Or, if you do not wish this, you can descend by the same elevator down to the local subway.

On the other hand you can take an inter-urban subway, or if you desire you can go still further down, where you strike the long distance subway, traveling at the rate of about two hundred miles per hour. This will be at a depth of 400 feet.

The lower street level is given over to trucking only. There are no pedestrians on this level.

Fifty years hence our scientists will have solved the problem of controlling the weather, at least as far as our cities are concerned. Huge high frequency electric current structures, placed on top of our largest buildings, will either dispel threatening rain, or, if necessary, produce rain as needed during the hot spells or during the night.

The question is often asked: "What effect do radio stations have on living beings and on plants?"

At the present time there is practically no effect for the simple reason that the broadcast stations, as well as the commercial radio stations, send out a very diminutive amount of power.

Fifty years from now, with super-radio stations generating millions or billions of kilowatts, the situation will probably change. The beneficial action will then be felt by everyone, no matter where located on this globe. By that time, the high frequency currents will have become sufficiently powerful to have a vitalizing effect on every human being. We shall all be electrified then in the full meaning of the term.

Not only that, but plant life will also be greatly stimulated, as recent high frequency experiments on plants

have shown. Our crops and plants will grow practically two to ten times as quickly and the crops will be more productive under this electrification. Under such stimulation it will be quite possible to raise crops at least twice or perhaps more often during the year; and the most interesting part about this is that it will cost the farmer absolutely nothing except for fertilizer. And this he requires anyway.

Outside of these effects there are, however, other physiological effects on the human body that should be mentioned. Everyone knows of the beneficial effect that we experience when we grasp the handles of a small electrifying machine, known better under the popular name of the electric shocking machine. Technically this is known as Faradization.

We know how this treatment stimulates our nerves, how it injects new vitality into us, and how in popular parlance it "peps us up." If we could be under such stimulus twenty-four hours a day and, as we all know, it is perfectly harmless, it certainly would increase our working efficiency to a very marked extent. It would probably do away with such common ailments as headaches. It would improve our digestion. Rheumatism would be practically unknown, and the "nervous wrecks" would only be found in ancient histories. In a small way, the electrification effects just mentioned may be actually experienced today in the vicinity of any large radio station.

For instance, the Government station at Arlington, VA (NAA), is so powerful that if you walk underneath the aerial wires, which are 800 feet above your head, you will experience a tingling sensation on the soles of your feet as you step on the moist earth. If an automobile drives along the road underneath the aerial you are able to draw stinging sparks from the car and from the occupants, because the automobile, due to its rubber tires, is insulated from the conducting ground, while you, standing on the ground, are not insulated. Now, then, the power of NAA is comparatively weak compared with the radio super-stations we shall have in the future.

Perhaps it will be possible for children under such

electrification to grow up more quickly without bad effect. Under constant electrification, it may be possible, fifty years from now, that a child of six will be mentally and physically equal to the youth of eighteen today.

The future city will receive its power by radio, of course, from distant waterfalls, or from distant sunlight power plants. Tremendous quantities of energy are going to waste today, all of which can be collected and sent to our large centers by wireless.

Indeed, some of the sunlight power plants can be located right in the heart of the city, if desired, and such plants will be sufficient to take care of the power for our office buildings and smaller manufacturing shops.

The tops of our tallest buildings will be flat and glass-covered. They will have airplane landing platforms on which all kinds of airplanes, or even the trans-Atlantic planes of the future will land.

Our large office buildings, or, for that matter, private houses, will have real gardens, with large trees on top of the roofs, as has already been tried experimentally with smaller plants in some of our large cities.

All of our buildings and houses are due for a great revolution. In the Wintertime all of our buildings will be warm, and in the Summertime they will be cool. The future buildings and houses will be fashioned along the principle of a thermos bottle. Each wall will be double, and the space between the walls will be filled with cork or some other poor heat conductor.

At the present time as soon as we heat a room the heat is dissipated through the walls and through the windows. By having double walls and double or triple window panes, a small electric heater will keep a big room warm. In the Summertime, on the hottest day, our rooms will be nice and cool, because no heat can get into the room. All year around, windows will be kept closed, the same as they are now in the Winter; of course, there will be some ventilation in order to

give us air, but this air will be cooled in the Summer and heated in the Winter.

We must stop here, first, for lack of space and second, because we do not wish to be ridiculed. We do not wish to delve into the future of what will be going on inside of these buildings, because we probably would not be believed.

The following are some of the impossible things that will have become possible fifty years hence:

By that time, we shall be able to send all sorts of materials by radio. If you think that it is impossible to transmit a carload of coal thousands of miles, you need only go back less than fifty years, when it would have been thought equally impossible to have the street cars of Syracuse, N. Y., run by the power generated by Niagara Falls. Today no one thinks anything of this.

To anyone who doubts that solids can be transported through space it should be pointed out that the same thing is being done right now. Every time an X-ray picture is taken, solid particles leave the X-ray tube, being shot right through the glass walls of the tube. These small particles, which are being shot at tremendous speeds, then impinge upon the photographic plate, if such is in the path, where they blacken the plate, which we see visually after the plate is developed.

A similar action takes place with radium. Alpha and Beta particles, which are given off by radium, are just as solid substances as bricks or pieces of steel. These particles are shot off from the radium substances.

In time it will be possible to do the same thing by radio. In other words, let us say, a brick will be disintegrated into its elements and radiated out into space the same as radio waves. or light waves are now radiated, to be reassembled at the receiving station.

This may seem quite incredible today, but it is not at all so to the up-to-date scientist who can see into the future.

Fifty years hence, we shall not be using our wasteful electric bulbs either, which waste over 98 per cent of the energy put into them. We shall have cold light, and we shall utilize nearly all the energy, instead of throwing nearly all of it away in wasteful heat.

Movies by radio! Why not? You will be able to have a moving picture produced in some central plant and projected in your home, on your yacht, or on your camping trip, the picture being sent by radio, and received and projected upon your screen. All this is perfectly possible.

Fifty years hence, we shall surely have the "telephot," whereby we shall be enabled to see each other over the phone, instead of being satisfied with the voice as we are today. Much progress has been made on this invention, and many models built, and while so far nothing practical has been developed, we are getting there by degrees.

The chances are that if someone runs across this fifty years from now, he will severely condemn the writer of this for his great lack of imagination, for, no matter how wild the predictions may seem now, they will look very tame fifty years hence. If someone had tried to explain radio to you fifty years ago, or the X-ray, or radium, he would have been put down as ripe for the insane asylum, and you may rest assured that we are no different today.



As the Wife Sits at the Telephone to Talk to Her Husband in His Office, She Will See Him and His Desk and All the Surrounding Room as Plainly as if She Were There with Him.



Stories By

Isaac Asimov
John W. Campbell
Murray Leinster
Frederik Pohl
Niel R. Jones
Kurt Vonnegut
A. E. van Vogt
Theodore Sturgeon
Poul Anderson
Phillip K. Dick
Frank Herbert
James Blish
Lester del Rey
Jerome Bixby